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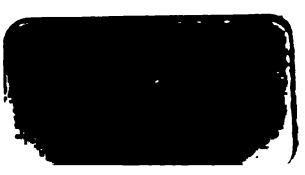

SUBJECT-MATTER INDEX

OF

PATENTS APPLIED FOR AND PATENTS GRANTED

FOR THE YEAR 1863.

15 & 16 VICTORIÆ, Cap. 83. Sec. XXXII

SUBJECT-MATTER INDEX

OF

PATENTS APPLIED FOR AND PATENTS GRANTED

For the Year 1863.

Printed and Published by Order of the Honourable the Commissioners of Patents,

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SUBJECT-MATTER INDEX

OF

PATENTS APPLIED FOR AND PATENTS GRANTED,

For the Year 1863.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
ACCIDENTS (*Prevention of*).			
Improved arrangements for portable fire-escapes -	7	1st Jan. 1863	Joshua Joseph Southgate.
Means or apparatus for saving or preserving money, papers or other valuable property at sea in case of shipwreck. (*Communicated by Charles Blacktin.*)	35	5th Jan. 1863	Henry Blacktin.
Improved means or apparatus for preventing overwinding at collieries and to provide extra breakage power to steam-engines.	71	9th Jan. 1863	John Punshon.
Apparatus for saving life and property from fire and other danger in buildings and mines.	113	13th Jan. 1863	John Boyle Rock.
Safety apparatus for steam-boilers - - -	229	26th Jan. 1863	James Fyfe.
Arrangements employed for the protection of markers at rifle butts.	362	10th Feb. 1863	Thomas Hill.
Floating or life preserving coats or garments - (*Communicated by Jean Louis Vergniais.*)	431	17th Feb. 1863	Estève Deville.
Preventing the explosion of steam-boilers - -	437	17th Feb. 1863	Desiré Tassin.
An improved life preserving garment - - -	510	24th Feb. 1863	Augustus Junger.
Escape or relief valves to the cylinders of marine and other steam-engines.	572	28th Feb. 1863	John Penn.
Apparatus for detecting and detaining thieves and indicating the presence of fire.	613	4th March 1863	James Craig.
Improved apparatus for opening and closing the gates of railway crossings, which apparatus also acts simultaneously upon the signals.	651	9th March 1863	Charles Henry Lea.
Apparatus for indicating any regulated maximum or minimum degree of temperature. (*Fire alarm.*) (*Communicated by Alexander Ross.*)	670	11th March 1863	John Werge.
Fire-arms - - - - - - -	787	26th March 1863	Louis Christofleau.
Fire-escapes - - - - - - - - -	823	30th March 1863	James Payne.
Improvements in or applicable to railway carriages to mitigate or lessen the effects of collisions to passengers.	918	11th April 1863	Walter Samuel.
Improvements in furnaces and boilers for the generation of steam, partly applicable also for other purposes.	942	14th April 1863	John Smith.
Safety-valves - - - - - - (*Communicated by Johann Andreas Schubert.*)	1038	25th April 1863	Charles Beyer.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
ACCIDENTS, &c.—*continued.*			
Apparatus for preserving property in case of shipwreck. (*Communicated by George Mitchell.*)	1067	28th April 1863	John Henry Johnson.
Miners' lamps	1140	7th May 1863	Peter Bourne.
Manufacture of certain articles to be used for preserving life at sea and other purposes.	1263	20th May 1863	Walter John Colin Lang.
Safety garments (*Communicated by André Selingue.*)	1303	23rd May 1863	Richard Archibald Brooman.
An improved mode of constructing ships, vessels or boats, and of apportioning their freight to that construction, so as to prevent their sinking or being destroyed by fire.	1414	8th June 1863	William Miller.
Miners' lamps	1444	10th June 1863	Joseph Brooke.
An improved guard or fence for coal, iron, stone or other pits, warehouse or other lifts, sack holes, or other places requiring a guard or fence.	1745	13th July 1863	Joseph Barton.
Certain descriptions of breech-loading fire-arms (*Communicated by Adolphe Jean Victor Marcet.*)	1752	13th July 1863	Henri Adrien Bonneville.
Apparatus for the prevention of boiler explosions	1812	20th July 1863	John Bailey. William Henry Bailey.
Improvements in safety valves and in apparatus connected therewith.	1830	21st July 1863	William Naylor.
An improved danger signal to be used on rifle, artillery and other practising grounds.	1838	22nd July 1863	Isaac Perrin.
Apparatus for securing the safety of persons in window cleaning, or otherwise working outside of windows.	1840	23rd July 1863	William Cole.
Improvements in apparatus for extinguishing chimney fires and in preventing explosions.	1842	23rd July 1863	Louis Laurent Jacques Fillion.
Construction of force pumps	1893	31st July 1863	George Sigl.
Improved means of preventing accidents upon railways.	2010	14th Aug. 1863	Robert Benjamin Greenwood.
Improved method of storing and holding petroleum and other oils, naphtha and other products of distillation containing essential oils. (*Communicated by Seth Haskell Ingalls.*)	2115	27th Aug. 1863	Theodore Bourne.
Improvements in steam-boilers and in apparatus connected therewith.	2130	28th Aug. 1863	Joseph Walls.
Improved arrangements for removing the fuel from stoves or grates, and for facilitating the extinguishing of the fires used therein.	2149	31st Aug. 1863	Benjamin Lile Burnett.
A method of preparing mica and talc in order to render them applicable to articles of wearing apparel and to ornamental purposes.	2154	31st Aug. 1863	George Brooks Pettit.
Safety lamps for mines (*Communicated by François Chapuis and Léonce Decombette.*)	2256	14th Sept. 1863	William Edward Gedge.
Improved arrangements for facilitating the quick detachment of horses or draught animals from carriages or vehicles, and for the application of break power, with the view to prevent accidents.	2257	14th Sept. 1863	George Francis Millin.
Apparatus applied to railway carriages and trains in order to obtain greater safety to passengers.	2285	17th Sept. 1863	John Gottlieb Ulrich.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
ACCIDENTS, &c.—*continued*			
Life belts and swimming belts - - - (*Communicated by Torrilhon Verdier and Company.*)	2286	17th Sept. 1863	John Henry Johnson.
Improvements in railway telegraphs and signals and also in the permanent way and carriages, for preventing railway accidents.	2332	21st Sept. 1863	Wilhelm Adolf Von Kanig.
Ventilators and fire-guards - - -	2712	2nd Nov. 1863	Thomas Fitzgerald Wintour.
Improvements in safety valves for steam-boilers, and in valves and taps for regulating the flow of fluids.	2745	5th Nov. 1863	Sydney Smith.
Improved modes of preventing accidents arising from the sale or use of poisons.	2866	16th Nov. 1863	Gilbert Thonger.
Fire-escapes - - - - -	2965	25th Nov. 1863	Matthew Power.
Apparatus for sustaining and lifting draught horses to prevent them falling or injuring the vehicle to which they are attached.	3061	5th Dec. 1863	Frederick James Walthew.
Railway carriage and other brakes - -	3063	8th Dec. 1863	Jean Aubert.
Apparatus for preventing the explosion of steam-boilers.	3111	10th Dec. 1863	Henry Turner.
Improvements in raising sunken vessels and other submerged dead weights, and in preventing the sinking of vessels in case of accident at sea, and in the apparatus employed therein. (*Communicated by James McLeod.*)	3142	12th Dec. 1863	John Henry Johnson.
A new apparatus for the prevention of railway accidents.	3243	23rd Dec. 1863	Mara Matilda Twining.
An improved apparatus to be attached to locomotive engines for the purpose of removing obstructions from railways.	3299	30th Dec. 1863	Maxime Charles Edouard Houdayer. Jules Jean Cormier.
ACIDS AND VINEGAR.			
Improvements in the treatment of gas produced by the distillation of coal, cannel, bituminous shale, boghead, mineral oils, petroleum or other combustible substances, and for the obtaining of certain products therefrom. (*Oxalic acid and nitro-benzole.*)	44	6th Jan. 1863	John Leigh.
Improvements in treating coal tar dead oils and for producing phenic or carbolic acid. (*Communicated by Jean Jaques Müller.*)	395	13th Feb. 1863	Jules Albert Schlumberger.
An improved method of applying heat in the manufacture and refining of sugar, and in malting, hop drying, brewing, distilling and vinegar making.	584	2nd March 1863	Charles Garton.
Improvements in the manufacture of sulphuric acid and in apparatus for the same. (*Communicated by Louis Désiré Verstraet and Charles Schmid.*)	611	4th March 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
ACIDS, &c.—*continued.*			
A new aromatic vinegar for removing stains from cloth and other materials. (*Communicated by Philippe Prudon and Edouard Cari Mantrand.*)	648	9th March 1863	Henri Adrien Bonneville.
Separation or obtaining of ammonia from azoted matters in the preparation of manure. (*Manufacturing phosphoric acid.*) (*Communicated by Lucien Henry Blanchard and Théodore Chateau.*)	761	21st March 1863	William Clark.
Manufacture of sulphuric acid and sulphate of iron	863	4th April 1863	Peter Spence.
Improvements in the manufacture of baryta and its derivatives, in obtaining by-products, and in revivifying or recovering certain agents employed in such manufacture.	878	7th April 1863	Richard Archibald Brooman.
Improvements in purifying and treating coal gas, sulphuretted hydrogen, and other gases containing sulphuretted hydrogen, and in obtaining sulphur, sulphuric and other acids in such treatment - - - - - - -	956	16th April 1863	Isham Baggs. William Simpson.
Treating the waste liquors from bleaching powder stills in order to obtain hydrochloric acid and other products therefrom.	967	17th April 1863	Robert Calvert Clapham.
Improvements in obtaining and purifying oxalate of soda, which improvements are also applicable to the manufacture of oxalic acid.	1116	5th May 1863	William Walsh.
Improvements in the construction and arrangement of galvanic batteries and in the utilization of products resulting therefrom. (*Regaining nitric acid.*)	1732	10th July 1863	Ludwig Sille.
New employment of magnesia and its combinations in manufactures - - - - - (*Sulphuric and muriatic acid.*)	1776	15th July 1863	Doctor Christian. Gustav Clemm.
Certain improvements in the mode of treating fatty bodies.	1778	16th July 1863	Hypolite Mège.
Manufacture of size, glue and phosphates -	1914	3rd Aug. 1863	Balthazar Wilhelm Gerland.
Apparatus for evaporating and distilling - -	2106	26th Aug. 1863	Jacques Louis Kessler.
Obtaining sulphur and sulphurous acid from alkali waste.	2203	8th Sept. 1863	Ludwig Mond.
An improved construction of furnace for roasting pyrites.	2245	11th Sept. 1863	Moritz Gerstenhöfer.
Manufacture of soda and sulphuric acid - -	3044	3rd Dec. 1863	James Bowron. George Robinson.
ADVERTISING.			
Improved media for advertising - - - (*Communicated by Antoine Masson.*)	58	7th Jan. 1863	William Clark.
Improved appliances for displaying in the open air or indoors illuminated designs, devices, mottoes or announcements, and in which jets of gas are employed as the illuminating agent - -	449	18th Feb. 1863	Josiah Puntis. George Cox.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
ADVERTISING—*continued.*			
Means or apparatus for registering suitable for advertisers' purposes.	612	4th March 1863	William Hamilton.
Means of obtaining publicity - - - (*Communicated by Louis Jean Delton.*)	1004	22nd April 1863	William Clark.
An improved system of permanent advertisement - (*Communicated by Basile Victor Larsonneau.*)	1078	29th April 1863	William Edward Gedge.
An improved advertising medium - - -	1837	22nd July 1863	Benjamin Beral Bertram.
New or improved apparatus for the regulated delivery of cards, tickets, labels, bills and sheets or pieces of cardboard, paper, metal or other material, for advertising or other purposes.	1964	8th Aug. 1863	Henry Rowland Brown.
Tablets, show bills and trade announcements used for advertising and other purposes.	2436	5th Oct. 1863	Benjamin George George.
An improved system of permanent advertisement - (*Communicated by Basile Victor Larsonneau.*)	2663	28th Oct. 1863	William Edward Gedge.
Manufacture of show cards, window tickets and ornamental labels as advertising mediums -	2698	31st Oct. 1863	John Wasserburger. Theodore Bessunger.
AËRATING; AËRATED LIQUIDS; MINERAL WATERS.			
Apparatus for generating carbonic acid - - (*For saturating liquids with gas.*)	732	18th March 1863	Auguste Morel.
Improvements in decorticating grain and seeds, and in the application of the products obtained by and materials used in decorticating. (*Applied in making artificial mineral waters.*) (*Communicated by Jules Lemoine and Louis Joseph Maximilien Chollet.*)	1542	19th June 1863	Michael Henry.
Apparatus for aërating liquids - - - (*Communicated by Frédéric Jean Greffier and Paul Dyé.*)	1609	26th June 1863	William Clark.
Improvements in apparatus for supplying carbonic acid gas to casks or other vessels containing beer or other fermented liquid. (*Communicated by James Harrison.*)	1677	6th July 1863	Samuel John Cooke.
Apparatus for evaporating and distilling - - (*Mineral waters.*)	2106	26th Aug. 1863	Jacques Louis Kessler.
AËRIAL MACHINES.			
Aërial Machines - - - - - (*Communicated by Pierre Jacques Carmien.*)	867	6th April 1863	William Edward Gedge.
Means of keeping cameras or other apparatus steady when suspended to balloons - - -	2026	15th Aug. 1863	Johann Ernst. Friedrich Ludeke.
Apparatus for aërial navigation - - -	2141	29th Aug. 1863	Walter Weldon

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AERIAL MACHINES—*continued.*			
Improvements in the application of steam combined with air as a motive-power and for other purposes. (*For balloon propulsion.*)	2620	23rd Oct. 1863	James Parker.
Balloons or aëronautic apparatus - - - (*Communicated by Eugene Godard.*)	2959	24th Nov. 1863	William Edward Newton.
Apparatus for aërial locomotion - - -	3284	29th Dec. 1863	Henri Reda de Saint Martin.
AIR, GAS AND WIND ENGINES AND MILLS; PNEUMATIC MOTIVE-POWER.			
Hot air engines - - - - - (*Communicated by Elmer Townsend.*)	155	17th Jan. 1863	George Tomlinson Bousfield.
An improved mode of obtaining and applying motive-power.	261	28th Jan. 1863	Bryan I'Anson Bromwich.
An improved atmospheric engine applicable to purposes to which steam, horse, wind and water power is applied.	281	30th Jan. 1863	Nicholas Philip Comins Lloyd.
Improvements in valves and in apparatus connected therewith.	507	24th Feb. 1863	Edward Ross Walker.
Improved machinery for obtaining and applying motive-power.	653	9th March 1863	Pierre Hugon.
Apparatus for generating carbonic acid - - (*Applicable as a gas engine.*)	732	18th March 1863	Auguste Morel.
Apparatus for the purpose of using air and steam as a motive-power.	981	20th April 1863	Claude Blanc.
An improved atmospheric engine applicable to purposes to which steam, horse, wind and water power is employed.	989	21st April 1863	Nicholas Philip Comins Lloyd.
Improvements in engines, machinery and apparatus for obtaining compressed air and for applying the power thereof in propelling railway and other carriages - - - - -	1092	30th April 1863	Charles Patrick Stewart. John Kershaw.
Engines for obtaining motive-power by steam, air or any other vapour.	1868	27th July 1863	James Whittaker.
Air and gas engines - - - - (*Communicated by Auguste Nicol Otto.*)	2096	24th Aug. 1863	Richard Archibald Brooman.
Improvements in the generation and production of motive-power to be applied generally, and in its special application to the propulsion of vessels -	2191	5th Sept. 1863	Thomas Moody. Edward Toms Moody.
Pneumatic motive-power machinery - -	2289	17th Sept. 1863	James Whitehead.
Rotary engines to be worked by water, steam, air and other motive-power.	2365	25th Sept. 1863	Edward Lloyd.
Improvements in the application of steam combined with air as a motive-power and for other purposes.	2620	23rd Oct. 1863	James Parker.
Caloric or heated air engines - - - (*Communicated by Henry Messer.*)	2806	11th Nov. 1863	Walter Davis Richards.
Atmospheric or pneumatic railways and locomotive engines to be used in connection therewith.	2830	13th Nov. 1863	George Remington.

See also "GOVERNORS."

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AIR SUPPLYING, BLOWING, EXHAUSTING; DRAFT AND VENTILATION.			
I.—Supplying Air to Furnaces, Stoves, Lamps, &c.; Increasing and Regulating Draft; Tuyeres; Dampers; Chimney Wind Guards; Heating Blast.			
Certain improvements in steam-engines - -	23	3rd Jan. 1863	Harry Jones.
Furnaces - - - - - (*Communicated by Hyppolite Godard-Desmarest.*)	84	9th Jan. 1863	Michael Henry.
Improvements in the manufacture and treatment of malleable iron and steel, and in furnaces, machinery and apparatus employed in such manufacture.	114	13th Jan. 1863	Henry Bessemer.
Manufacture of candles - - - - - (*Communicated by Pierre Louis Durand.*)	266	29th Jan. 1863	Richard Archibald Brooman.
Improvements in supplying air, gases, steam or fluids to iron and other furnaces, and to engines and vessels requiring such supply, and in the apparatus employed therein.	291	31st Jan. 1863	Edward Brown Wilson.
Means or apparatus for effecting a regular supply of air or aëriform fluids for various purposes.	335	6th Feb. 1863	George Stevens.
Regulating the admission of air into the furnaces of steam-boilers.	358	9th Feb. 1863	John Goucher.
Chimney tops - - - - -	432	17th Feb. 1863	James Durrant.
Ovens or kilns for firing, burning or baking pottery, bricks, tiles and other earthen or ceramic articles.	471	21st Feb. 1863	Charles Malpas.
Apparatus for heating the blast in the manufacture of iron.	485	23rd Feb. 1863	William Henry Gauntlett.
Improvements in lamps and burners, and in apparatus employed for milling or ornamenting parts of lamps, which apparatus may also be applied to other similar uses.	491	23rd Feb. 1863	Ralph Martindale.
Construction of furnaces - - - - -	568	28th Feb. 1863	Stephen Williamson.
Self-acting dampers for steam-engine furnaces -	634	6th March 1863	Alexander Cuthell.
An improved stove or fire-grate for heating, cooking, boiling or other similar purposes.	702	16th March 1863	Felix Hoyos.
Improvements in the construction of lamps with circular burners or wicks, for the combustion of petroleum, schist and other volatile oils, parts of said improvements being applicable to gas burners, night lights, and lamps burning spirits and animal oils.	755	21st March 1863	Charles de Groote.
Ovens and apparatus for heating the same - -	765	23rd March 1863	Thomas George Grant.
Improvements in furnaces or fire-places and in apparatus to be used in connection therewith. (*Communicated by Louis Herbert.*)	796	26th March 1863	John Henry Johnson.
Improvements in boilers for heating buildings and in regulators for the same.	948	15th April 1863	Ambrose Marriott.
Improvements in steam-boilers and in regulating the admission of air into the furnaces of steam-boilers.	966	17th April 1863	John Goucher.
Improvements in furnaces which are principally applicable to the smelting of iron.	972	18th April 1863	Charles William Siemens. Frederick Siemens.
Improvements in twyers or blast pipes and in apparatus connected therewith. (*Communicated by Jean Baptiste Monsallié*).	1049	27th April 1863	William Edward Gedge.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AËRIAL MACHINES—*continued.*			
Improvements in the application of steam combined with air as a motive-power and for other purposes. (*For balloon propulsion.*)	2620	23rd Oct. 1863	James Parker.
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An improved mode of obtaining and applying motive-power.	261	28th Jan. 1863	Bryan I'Anson Bromwich.
An improved atmospheric engine applicable to purposes to which steam, horse, wind and water power is applied.	281	30th Jan. 1863	Nicholas Philip Comins Lloyd.
Improvements in valves and in apparatus connected therewith.	507	24th Feb. 1863	Edward Ross Walker.
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Apparatus for generating carbonic acid - - (*Applicable as a gas engine.*)	732	18th March 1863	Auguste Morel.
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Improvements in engines, machinery and apparatus for obtaining compressed air and for applying the power thereof in propelling railway and other carriages - - - - -	1092	30th April 1863	Charles Patrick Stewart. John Kershaw.
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See also "GOVERNORS."			

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AIR-SUPPLYING, &c.—*continued.*			
Improvements in apparatus for containing and distributing gas for lighting railway carriages, steam-boats, and other moveable vehicles and vessels, railway stations and other places, parts of such apparatus being suitable for governing the supply of gas and air for various purposes.	1978	11th Aug. 1863	John Thomson King.
Fans, pumps and machinery for propelling air, fluids or other substances by centrifugal force. (*For blast furnaces.*)	2008	14th Aug. 1863	Christian Schiele.
Blast furnaces - - - - - -	2012	14th Aug. 1863	Edward Brown Wilson.
Apparatus for attaching to steam-boilers and flues for the consumption of smoke.	2042	17th Aug. 1863	Thomas Loftus.
Limekilns - - - - - -	2048	18th Aug. 1863	Henry Robinson.
Improvements in chimney tops, which improvements are also applicable to coverings for ventilating shafts or flues for mines and other places.	2049	18th Aug. 1863	Thomas Dobb.
Improvements in steam-boilers and in apparatus connected therewith. (*Making dampers self-acting*).	2130	28th Aug. 1863	Joseph Walls.
Furnaces - - - - - -	2185	4th Sept. 1863	John Hendry. William Coutts.
Steam-boiler and other furnaces - - -	2221	9th Sept. 1863	John Robinson.
Improved means of and apparatus for employing vapours, gases and the heat derived from combustible matters.	2241	11th Sept. 1863	Louis Meyer.
An improved construction of furnace for roasting pyrites.	2245	11th Sept. 1863	Moritz Gerstenhöfer.
Construction and application of apparatus and implements used for the purpose of heating, cooling and evaporating.	2253	14th Sept. 1863	Henry Riviere.
Locomotive or other steam-engines - -	2263	15th Sept. 1863	Andrew Barclay.
Lamps and lamp wicks - - - - (*Communicated by David Eldon Hall.*)	2305	18th Sept. 1863	Vasconcellos Houghton.
Improvements in furnaces for heating wheel hoops, applicable also for other similar purposes.	2355	24th Sept. 1863	Amos Firth.
Improvements in furnaces and fire-places applicable to the heating of steam-boilers and other purposes.	2375	26th Sept. 1863	Edward Brown Wilson.
Improvements in the construction of steam-boilers and in their fire-grates. (*Increasing the draft.*)	2377	28th Sept. 1863	Louis Joseph Joachin Jean.
Improvements in and application of apparatus for aiding the combustion of fuel.	2435	5th Oct. 1863	George Henry Ellis.
Improvements in steam-engines and in furnaces and boilers for the same.	2437	5th Oct. 1863	Thomas Ivory.
Steam-boilers and furnaces - - - (*Communicated by Johann Christian Carsten Meyn.*)	2444	6th Oct. 1863	Richard Archibald Brooman.
Improvements in lamps especially applicable to the burning of hydro-carbons. (*Communicated by William Painter.*)	2453	7th Oct. 1863	Charles Pomeroy Button.
An improved method of extinguishing fires in chimneys and flues, regulating and promoting draft therein, calculated also to act as a ventilator.	2481	9th Oct. 1863	Noah Fellows.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AIR-SUPPLYING, &c.—*continued.*			
A new and useful or improved submarine lantern to be used in explorations beneath the surface of the ocean or any other large body of water.	1065	28th April 1863	George Washington Fuller.
Certain improvements in apparatus for weighing solid bodies and for measuring fluids, parts of which improvements are also applicable to the opening and closing of "dampers."	1076	29th April 1863	Ellis Rowland.
Improvements in the manufacture of wrought iron and steel, and in the apparatus to be employed therein. (*Communicated by Adrien Müller.*)	1115	5th May 1863	John Henry Johnson.
Arrangement or construction of furnaces to render the combustion of the fuel more complete and to prevent the emission of smoke therefrom.	1147	7th May 1863	Jean Baptiste Pierre Alfred Thierry.
An improved mechanical movement for producing an impelled current of air for lamps, and which may be used for other purposes. (*Communicated by Francis Bernard de Keravenan*).	1154	8th May 1863	Joseph Henry Bailey.
Glass and other furnaces or kilns - - -	1189	12th May 1863	Thomas Warren.
Generating heat and motive-power - -	1220	15th May 1863	Benjamin Shillito. David Moor.
An improved mechanical lamp - - -	1257	19th May 1863	Lasalo Chandor.
Improvements in coke ovens and in building and heating ovens or retorts for generating coal gas connected therewith.	1287	22nd May 1863	George Stevens.
Chimneys, fire-places, stoves and flues for warming and ventilating apartments.	1296	23rd May 1863	Samuel Egan Rosser. Josiah George Jennings.
Lamps for burning hydro-carbon oils - - (*Communicated by Louis Martin.*)	1305	23rd May 1863	George Smith.
An improved method of accelerating the draft in furnaces and fire-places.	1351	29th May 1863	Jerome Jean Potel.
Apparatus for obtaining artificial light from volatile liquids or fluids.	1445	10th June 1863	William Wells. John William Myers.
Improvements in obtaining and applying motive-power and in apparatus for the same. (*Communicated by Antoine Merlanchon.*)	1449	11th June 1863	William Clark.
Prevention of smoke in steam-boilers and other furnaces. (*Communicated by Henry David Furness.*)	1475	12th June 1863	John Furness Tone.
Improvements in fire-bars for the boilers of locomotive and other engines, and for fire-boxes and furnaces generally.	1491	15th June 1863	William William
An improved method of rendering atmospheric air fit for illuminating purposes and of increasing the illuminating power of inflammable gas.	1532	19th June 1863	Henry Reynolds.
Coal oil lamps - - - - - (*Communicated by Michael Boyd Dyott*).	1865	27th July 1863	George Haseltine.
Railway lamps - - - - -	1895	31st July 1863	Joseph Pope Culverwell.
Means or apparatus for effecting a regular supply of air or aëriform fluids for various purposes. (*To gas lights.*)	1921	4th Aug. 1863	George Stevens.
Improved apparatus for generating heat for smelting and other purposes. (*Forming hot blast.*)	1946	6th Aug. 1863	John Kirkham.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AIR-SUPPLYING, &c.—*continued.*			
Improvements in apparatus for containing and distributing gas for lighting railway carriages, steam-boats, and other moveable vehicles and vessels, railway stations and other places, parts of such apparatus being suitable for governing the supply of gas and air for various purposes.	1978	11th Aug. 1863	John Thomson King.
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Improvements in and application of apparatus for aiding the combustion of fuel.	2435	5th Oct. 1863	George Henry Ellis.
Improvements in steam-engines and in furnaces and boilers for the same.	2437	5th Oct. 1863	Thomas Ivory.
Steam-boilers and furnaces - - - - (*Communicated by Johann Christian Carsten Meyn.*)	2444	6th Oct. 1863	Richard Archibald Brooman.
Improvements in lamps especially applicable to the burning of hydro-carbons. (*Communicated by William Painter.*)	2453	7th Oct. 1863	Charles Pomeroy Button.
An improved method of extinguishing fires in chimneys and flues, regulating and promoting draft therein, calculated also to act as a ventilator.	2481	9th Oct. 1863	Noah Fellows.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AIR-SUPPLYING, &c.—*continued.*			
Means of uniting or joining plates or sheets of metal, which invention is applicable to the construction of boilers, tubes and other useful purposes.	2549	17th Oct. 1863	Edward Henry Cradock Monckton.
An improved burner for burning petroleum, paraffin or other hydro-carbon oils, consuming the smoke without the use of a draft chimney.	2614	23rd Oct. 1863	Alfred Joseph Martin.
Improvements in the application of steam combined with air as a motive-power and for other purposes. (*Supplying warm blast to furnaces.*)	2620	23rd Oct. 1863	James Parker.
Machinery for raising and forcing fluids, parts of which improvements are also applicable to steam-engines, blast engines, exhausters and other machines.	2707	31st Oct. 1863	Stephen Holman.
Fans for forcing and exhausting air or other gases - (*For blowing blast furnaces.*)	2726	4th Nov. 1863	Edward Hughes.
Improvements in the manufacture of malleable iron and steel, and in the apparatus employed in such manufacture.	2746	5th Nov. 1863	Henry Bessemer.
Certain apparatus for injecting and ejecting fluids (*Producing hot blast for furnaces.*)	2775	7th Nov. 1863	Andrew Barclay. Alexander Morton.
Caloric or heated air engines - - - (*Communicated by Henry Messer.*)	2806	11th Nov. 1863	Walter Davis Richards.
Certain improvements in apparatus for weighing solid bodies and for measuring fluids, parts of which improvements are also applicable to the opening and closing of dampers.	2818	12th Nov. 1863	Ellis Rowland.
Certain improvements in steam-boilers or generators.	2890	18th Nov. 1863	John Stewart.
Improvements in the construction of blast cylinders and also in the form and method of working the valves of the same.	2902	19th Nov. 1863	William Henry Gray.
Hot air stoves - - - - -	2919	20th Nov. 1863	Joseph Judge Hays.
An improved apparatus for causing a stronger and better draft or current of air, so that house fires may be lighted or kindled in a very short space of time, for effecting a very considerable saving in fuel, and for throwing the heat from such fire into the building or room.	3024	2nd Dec. 1863	Thomas Snook.
Improvements in obtaining and applying heat and in apparatus therefor, being also in part applicable for lighting - - - - (*Heating blast.*)	3057	5th Dec. 1863	William Gorman. John Paton.
Apparatus for regulating the passage of aëriform and other fluids. (*Draft in furnace chimneys.*) (*Communicated by Charles Joseph Louis Meynard.*)	3066	8th Dec. 1863	Michael Henry.
Lamps for burning hydro-carbons - -	3130	11th Dec. 1863	John Cliff.
Improvements in the manufacture of iron and steel, and in the machinery, apparatus and furnaces used therein, and for the production and application of gas to be employed in such manufacture, and the application of parts of the said apparatus to the manufacture of glass and alkali.	3213	19th Dec. 1863	William Henry Tooth.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AIR-SUPPLYING, &c.—*continued.*			
Improvements in supplying air to lights in mines, and in the apparatus employed for that purpose.	3265	24th Dec. 1863	William Renwick Bowditch.
II.—Supplying Air in Cleaning, Thrashing and Dressing Grain and Seeds.			
Machinery for drying and cooling grain and seeds - (*Communicated by Jesse Brown Wheeler and Simeon Losee.*)	737	19th Mar. 1863	Henry Osburne Haughton.
Machinery or apparatus for cleaning and decorticating grain.	822	30th Mar. 1863	Wilson Ager.
Construction of flour and meal mills - -	1393	4th June 1863	Stephen Blake. Thomas Lee. Robert Dutton.
Machinery for decorticating and cleaning corn and other grain. (*Communicated by Louis Basilide Sulpice Poissant.*)	1655	3rd July 1863	Robert Davison.
Arrangement and construction of fixed and portable combined thrashing-machines - -	1671	4th July 1863	George Allam Barrett. William Exall. Charles James Andrewes. Alfred Barrett. John Leakey Bowhay.
Thrashing and dressing machines - - -	1758	14th July 1863	James Holmes. George Thomas Holmes. Frederick Robert Holmes.
Separating and elevating apparatus for grain or granular matters.	2167	2nd Sept. 1863	Robert Young.
Threshing machines - - - -	2272	16th Sept. 1863	Bernard James Webber.
III.—Admitting, Forcing and Exhausting Air for Manufacturing and other Purposes; Air-pumps, Bellows, Fans and other Blowers; Forcing Gas through melted Metal, &c.			
Improvements in the manufacture and treatment of malleable iron and steel, and in furnaces, machinery and apparatus employed in such manufacture.	114	13th Jan. 1863	Henry Bessemer.
Apparatus for preventing and curing blight, decay, disease and rot in potatoes.	127	15th Jan. 1863	Henry Turner.
Improvements in the treatment of organic fecal and urinous matters for the purpose of deodorizing the same, and in the preparation of a portable manure therefrom, and in the treatment of ashes or other refuse of combustion to be combined therewith, also for improvements in machinery to be employed in the manufacture of the said manure.	132	15th Jan. 1863	John Harrop.
Certain improvements in preparing and bleaching "rheea" and other fibrous materials and fibres, which improvements are also applicable to bleaching yarns or piece goods - - -	300	3rd Feb. 1863	Charles Smithies. George Lancelot Smithies.
Machinery or apparatus for washing, wringing and mangling clothes or other textile fabrics.	312	4th Feb. 1863	Thomas Bradford.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AIR-SUPPLYING, &c.—*continued.*			
Improvements in blowing organs and other such musical instruments, parts of which improvements are also applicable to obtaining motive-power for other purposes - - - -	323	5th Feb. 1863	William Tudor Mabley. William Thomas Cheetham.
Improvements in obtaining and applying motive-power, which improvements or parts thereof are applicable for raising, forcing and measuring fluids. (*Blowing engines.*)	512	24th Feb. 1863	Robert William Thomson.
Apparatus for the purpose of supplying air for mixture with gases and other aëriform fluids.	525	25th Feb. 1863	Joseph Gailey.
Improvements in veneering or overlaying woods according to two methods, 1st, by means of steam exhaustion or steam pressure, or air exhaustion or air pressure, 2dly, by the employment of electro-magnetism.	533	25th Feb. 1863	Alexander Macivor.
Machinery or apparatus for cleaning, steaming, and preparing cotton or other fibrous materials to be spun.	569	28th Feb. 1863	Daniel Collinge.
Valves - - - - - - - (*For air pumps.*)	691	14th March 1863	William West.
Rag machines - - - - - -	806	27th March 1863	James Dixon Asquith. George Greenwood.
Improvements in tanning and in apparatus employed therein - - - - -	832	31st March 1863	Henry Hamer.
Improvements in the manufacture of iron and steel and other metals, and in the apparatus employed therein.	843	1st April 1863	Edward Brown Wilson.
Improvements in separating ores from their gangues and in apparatus for the same. (*Communicated by Louis Napoléon Langlois.*)	920	11th April 1863	William Clark.
An improved machine or apparatus for washing, squeezing, mangling and churning.	943	15th April 1863	James Leach.
An improved construction of blowing apparatus - (*Communicated by Joseph Perrigault.*)	952	15th April 1863	Alfred Vincent Newton.
Apparatus for cooling liquids - - - -	969	17th April 1863	William Massingham.
Manufacture of metals - - - - -	1006	23rd April 1863	Joseph Whitley. John Buckingham Pope. John Watson Burton.
Improvements in engines, machinery and apparatus for obtaining compressed air and for applying the power thereof in propelling railway and other carriages - - - - -	1092	30th April 1863	Charles Patrick Stewart. John Kershaw.
Improvements in the manufacture of wrought iron and steel, and in the apparatus to be employed therein. (*Communicated by Adrien Müller.*)	1115	5th May 1863	John Henry Johnson.
Rotary engines - - - - - (*For driving blowing machines.*) (*Communicated by Adrien Jules Alexis Dumoulin.*)	1233	16th May 1863	William Clark.
Improvements in treating flax and other fibrous plants in order to prepare the fibres thereof for spinning, and in apparatus employed therein.	1254	19th May 1863	Henry John Olding.
Improvements in the means of transmitting power on railways worked by vacuum or the pressure of air, and in the apparatus to be employed for such purpose.	1269	21st May 1863	George Rogers Harding.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AIR-SUPPLYING, &c.—*continued.*			
Distillation of coal tar, tar oil, resin, resin oils, all hydro-carbons, petroleum or other mineral or vegetable oils and spirits derived therefrom.	1295	23rd May 1863	William Cormack.
Blast engines - - - - -	1331	27th May 1863	Hiram Craven Coulthard.
An improved apparatus for conveying goods either in bulk or otherwise whether to or from the warehouse or vessel, having an inclined, vertical or horizontal movement, to be worked either by pressure of air or by vacuum and atmospheric pressure.	1366	1st June 1863	Frederick Warwick Smith.
Means for drying grain - - - - -	1367	1st June 1863	Lewis Scudder Chichester.
Certain improvements in steam-engines, steam-boilers, and steam heating apparatus.	1399	5th June 1863	Francis Alton Calvert.
Treatment of peat and other substances containing moisture.	1410	8th June 1863	Charles Edward Newcomen.
An improved pneumatic hammer useful also for punching and stamping metals.	1457	11th June 1863	William Walton.
Smiths' and other bellows - - - - -	1511	16th June 1863	John Collingwood Onions.
Improved means of and apparatus for boiling in vacuo at a low temperature.	1516	17th June 1863	James Newnam.
Apparatus for evaporating liquids - - -	1522	17th June 1863	Alexander Samuelson.
An improvement in baths - - - - - -	1545	20th June 1863	David Dunne Kyle.
Apparatus for charging air or gases with combustible vapours. (*Communicated by Joseph Chapa and Jacques Charrié.*)	1569	22nd June 1863	William Clark.
Manufacture of iron and steel - - -	1602	25th June 1863	Robert Mushet.
Machinery for stretching and drying fabrics - (*Communicated by Alexandre Fortuné Tulpin.*)	1608	26th June 1863	Alfred Tulpin.
Manufacture of iron and steel - - -	1613	26th June 1863	Robert Mushet.
Stoppers and lids or covers for jars, bottles and other vessels, also in closing and fastening other articles.	1625	30th June 1863	Josiah George Jennings. Manuel Leopold Jonas Lavater.
An improved mode of evaporating through the combined agencies of heat and centrifugal force, and the machinery employed therein, more particularly applicable to saccharine solutions.	1649	2nd July 1863	William Miller.
An improved mode of and apparatus for drying chemical compounds and other substances.	1992	12th Aug. 1863	Robert Stirling Newall.
Fans, pumps, and machinery for propelling air, fluids or other substances by centrifugal force.	2008	14th Aug. 1863	Christian Schiele.
Railway breaks actuated by the pressure of the atmosphere.	2015	14th Aug. 1863	Michel Siegrist.
Improvements in apparatus for economizing or regulating water-power used for blowing organs or harmoniums, which improvements are also applicable to other purposes where an irregular motive-power is desired.	2075	21st Aug. 1863	James Eccleston.
Improved means of communication between the passengers, guard and driver of a railway train in motion.	2076	21st Aug. 1863	Thomas Frederick Cashin.
Cleansing ships' bottoms - - - - -	2097	24th Aug. 1863	Henry Frederick M'Killop.
Diving apparatus - - - - - - - -	2118	27th Aug. 1863	James Ward.
Manufacture of steel - - - - -	2125	28th Aug. 1863	Edward Vickers.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AIR-SUPPLYING, &c.—*continued.*			
Obtaining sulphur and sulphurous acid from alkali waste.	2203	8th Sept. 1863	Ludwig Mond.
Improvements in granulating and drying gunpowder and in apparatus to be used therefor.	2230	10th Sept. 1863	Thomas Brown Jordan.
Improved means for assisting and regulating the process of fermentation.	2247	12th Sept. 1863	James King.
Drying or curing certain vegetable productions -	2259	14th Sept. 1863	William Gossage.
An improvement in refining sugar - -	2282	17th Sept. 1863	Phineas Cowan.
Improvements in drying paper, pasteboard and similar fabrics, and in the machinery, apparatus or means employed therein.	2287	17th Sept. 1863	Peter M'Laurin.
Improved machinery or apparatus for stirring or mixing various ingredients or materials to a pasty consistence, said machinery being especially adapted to the manufacture of bread and other articles of food. (*Communicated by Charles Constant Simonet de Changy.*)	2350	24th Sept. 1863	Adolphe Ernest Ragon.
Manufacture of driving straps or bands and of flexible tubes or hose.	2367	26th Sept. 1863	George Spill. Thomas James Briggs. Daniel Spill.
Improvements in refining crude pig iron and in furnaces connected therewith.	2477	9th Oct. 1863	George Parry.
Musical instruments - - - - - - -	2490	10th Oct. 1863	John Wesley Goundry.
Cotton gins - - - - - -	2511	13th Oct. 1863	Thomas Cowall Craven.
Lamps and stoves for the application of blast heat to horticultural, agricultural and other specified purposes.	2535	16th Oct. 1863	Frederick George Stuber.
Machinery or apparatus for opening, cleaning and mixing cotton or other fibrous materials.	2559	20th Oct. 1863	James Taylor. James Lees. John Lees.
Machinery, apparatus or means for drying, cleaning and cooling grain and other vegetable products.	2602	22nd Oct. 1863	John Weems.
Propelling navigable vessels - - - - -	2649	27th Oct. 1863	Thomas Hunter Holderness.
Machinery for raising and forcing fluids, parts of which improvements are also applicable to steam-engines, blast engines, exhausters and other machines.	2707	31st Oct. 1863	Stephen Holman.
Fans for forcing and exhausting air or other gases -	2726	4th Nov. 1863	Edward Hughes.
Improvements in the manufacture of malleable iron and steel, and in the apparatus employed in such manufacture.	2746	5th Nov. 1863	Henry Bessemer.
Machinery for ginning and cleaning cotton, a part of which are applicable to machines for other purposes.	2765	7th Nov. 1863	Horace Leeman Emery.
Improvements in saturating, washing and cleansing charcoal and other matters, applicable also to the separation of syrups from sugar.	2855	14th Nov. 1863	Lauchlan Mackirdy.
Method of driving and feeding cotton gins, and of conveying away the ginned cotton and seeds therefrom.	2863	16th Nov. 1863	Evan Leigh. Frederick Allan Leigh.
Machinery for ginning cotton and for opening cotton and other fibrous substances.	2915	20th Nov. 1863	Benjamin Dobson. Edward Barlow. Peter Knowles.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AIR-SUPPLYING, &c.—*continued.*			
Construction of fan blowers for ventilating and other purposes. (*Communicated by Milton Nobles.*)	2924	20th Nov. 1863	William Edward Newton.
Improvements in preserving grain, flour and other similar substances, and in the apparatus connected therewith. (*Communicated by Alphonse Louvel.*)	2926	20th Nov. 1863	Henri Adrien Bonneville.
Preserving animal and vegetable substances -	2951	24th Nov. 1863	Davis Wilson Rea.
Marine fog signals or alarums - - - -	2962	24th Nov. 1863	Celadon Leeds Daboll.
Improvements in preparing materials useful in the purifying of gas from sulphuretted hydrogen, carbonic acid and ammonia, and in making ammoniacal compounds.	2971	26th Nov. 1863	Richard Laming.
Improvements in generating gas for illuminating and other purposes when made by passing atmospheric air over or through volatile oils, and treating such gas and the gas made from coal or cannel after leaving the generators, so as to improve the heating and illuminating qualities thereof, and in the apparatus for effecting the same.	3023	2nd Dec. 1863	William Wilson.
Distillation or treatment of bituminous substances (*Communicated by John Saunders.*)	3037	2nd Dec. 1863	Richard Archibald Brooman.
Printing machinery - - - - - (*Communicated by Stephen Davis Tucker.*)	3039	2nd Dec. 1863	William Edward Newton.
Improvements in washing textile fabrics, and in the machinery or apparatus employed therein. (*Communicated by Madame Rosine Saiglan Bagnères.*)	3062	5th Dec. 1863	John Henry Johnson.
Improvements in or applicable to machinery for preparing and combing wool and other fibrous substances.	3074	7th Dec. 1863	Edward Clifton.
Raising or removing grain from one place to another	3101	9th Dec. 1863	Henry Audinwood.
Improvements in malt and hop kilns, which improvements are partly applicable to the ventilation and warming of buildings, and to the drying of various substances.	3124	11th Dec. 1863	Alexander Epps.
Improvements in sizing or dressing and in drying fibrous materials or fabrics, and in apparatus therefor.	3137	12th Dec. 1863	Joseph Townsend.
Improvements in raising sunken vessels and other submerged dead weights, and in preventing the sinking of vessels in case of accident at sea, and in the apparatus employed therein. (*Communicated by James M'Leod.*)	3142	12th Dec. 1863	John Henry Johnson.
Improvements in cleaning roadways and in the machinery or apparatus employed therein. (*Communicated by Thomas Agudio.*)	3188	17th Dec. 1863	John Henry Johnson.
Improved apparatus for racking and decanting liquids (termed "Laburthe's Apparatus.") (*Communicated by Clement Laburthe.*)	3206	19th Dec. 1863	William Edward Gedge.
An improved method of feeding locomotive and other boilers, applicable also to the raising of water and other liquids.	3220	21st Dec. 1863	Edward Wilson. George Lindsey.
Machinery or apparatus employed in the manufacture of steel and iron.	3233	22nd Dec. 1863	Daniel Adamson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AIR SUPPLYING, &c.—*continued.*			
Improvements in the manufacture of certain descriptions of artificial manure and in apparatus to be employed therein.	3264	24th Dec. 1863	John Maynes.
An improved pneumatic apparatus for filling barrels used for watering roads and other purposes.	3285	29th Dec. 1863	Louis Edouard Desestre.
IV.—Ventilation; Supplying and Purifying Air for Buildings, Mines, Ships, Carriages, &c.			
Construction of hats and other coverings for the head.	209	23rd Jan. 1863	Charles Stopford.
Construction of granaries - - - (*Communicated by Louis Jean Gustave de Coninck.*)	262	29th Jan. 1863	Henri Adrien Bonneville.
Improvements in supplying air, gases, steam or fluids to iron and other furnaces and to engines and vessels requiring such supply, and in the apparatus employed therein.	291	31st Jan. 1863	Edward Brown Wilson.
Means or apparatus for effecting a regular supply of air or aëriform fluids for various purposes.	335	6th Feb. 1863	George Stevens.
Ventilation of ships and vessels and apparatus connected therewith.	535	26th Feb. 1863	Henry Edmonds.
Improvements in horticultural buildings and other glazed structures, part of which improvements is also applicable to ventilating other buildings.	624	5th March 1863	John Miller.
An improved composition for the coating and preservation of canvas and other materials to make them waterproof and non-inflammable. (*For ventilation of mines.*)	735	19th March 1863	Ellis Lever.
Improved means for ventilating mines - -	753	21st March 1863	Isaac Mark Evans. William Thomas Griffiths.
Constructing surface condensers and apparatus for heating and cooling fluids. (*For ventilation.*)	1052	27th April 1863	Julius Jeffreys.
Improvements in drainage and in water-closets, and in the means and apparatus necessary for the same respectively.	1096	1st May 1863	Edward Jones.
Manufacture of elastic material - - - (*Rendering self-ventilating.*) (*Communicated by Gustave Mayer.*)	1229	16th May 1863	Benjamin Browne.
An improved apparatus for saving from destruction by fire persons and property in houses, buildings and ships, and also for ventilating ships. (*Communicated by James Partridge.*)	1256	19th May 1863	Abraham Parker.
Chimneys, fire-places, stoves and flues for warming and ventilating apartments.	1296	23rd May 1863	Samuel Egan Rosser. Josiah George Jennings.
Improvements in the construction of the frames, sashes, shutters, blinds and ventilators for windows or other openings, part of which improvements are also applicable to other constructive purposes.	1315	25th May 1863	John Hilliar.
An improved system of ventilation applicable to every description of dwelling place and building.	1636	1st July 1863	Thomas Boyle.
An improved apparatus for fanning or for agitating air.	1669	4th July 1863	Alfred Norman.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AIR-SUPPLYING, &c.—*continued.*			
A new method of waterproofing and ventilating boots, shoes and slippers, for preventing wet and damp feet - - - - - -	1700	8th July 1863	Rebecca Tallerman. Lewis Abraham Tallerman.
Construction and arrangement of dwelling houses, in combination with the means employed for ventilating the same.	1740	13th July 1863	James Mortimer.
Ventilators - - - - - -	1825	21st July 1863	Edward Thomas Bainbridge.
Improvements in ventilating hay, corn and other ricks, and in apparatus connected therewith.	1873	28th July 1863	Douglas Taylor.
Means or apparatus for effecting a regular supply of air or aëriform fluids for various purposes.	1921	4th Aug. 1863	George Stevens.
An improved method of fire-proof construction for buildings, by the use of arches formed of concrete.	1998	13th Aug. 1863	Charles Colton Dennett.
Improvements in chimney tops, which improvements are also applicable to coverings for ventilating shafts or flues for mines and other places.	2049	18th Aug. 1863	Thomas Dobb.
An improved ventilating gas lamp or gasalier -	2074	21st Aug. 1863	James France Hill.
Improved means of and apparatus for employing vapours, gases and the heat derived from combustible matters. (*For ventilation.*)	2241	11th Sept. 1863	Louis Meyer.
Improvements in the mode of manufacturing submarine telegraph cables, in apparatus connected therewith, and in the method or principle of laying same, and in the preparation of the several compounds described for electric insulation and other purposes.	2386	29th Sept. 1863	Frederick George Mulholland.
Improvements in the manufacture of iron and other metals, and in the apparatus employed therein, parts of which are applicable for other purposes where high temperatures are employed, and also for ventilation.	2425	3rd Oct. 1863	Edward Brown Wilson.
An improved method of extinguishing fires in chimneys and flues, regulating and promoting draft therein, calculated also to act as a ventilator.	2481	9th Oct. 1863	Noah Fellows.
Buildings used for drying bricks, tiles and other articles.	2526	15th Oct. 1863	Henry Clayton.
An improved apparatus for ventilating railway and other carriages, houses, buildings, steam and sailing vessels of all kinds moveable or otherwise.	2530	15th Oct. 1863	Stephen Flexen.
Ventilators and fire-guards - - -	2712	2nd Nov. 1863	Thomas Fitzgerald Wintour.
Fans for forcing and exhausting air or other gases -	2726	4th Nov. 1863	Edward Hughes.
An improved machine adapted for performing various mining operations, such as working or cutting coal or other analogous substances in mines, forcing water from mines and air thereunto -	2786	9th Nov. 1863	Ralph Henry Philipson. John Dees.
Construction of fan blowers for ventilating and other purposes. (*Communicated by Milton Nobles.*)	2924	20th Nov. 1863	William Edward Newton.
Apparatus for lighting and ventilating - -	3033	2nd Dec. 1863	Joseph Cutler.
Apparatus used for heating and ventilating horticultural buildings - - - - -	3094	8th Dec. 1863	Peter Rigby Wason.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AIR-SUPPLYING, &c.—*continued.*			
Improvements in malt and hop kilns, which improvements are partly applicable to the ventilation and warming of buildings and to the drying of various substances.	3194	11th Dec. 1863	Alexander Epps.
ALKALIES; ALKALINE AND EARTHY SALTS; SALTS OF ALUMINA; BORAX, BARYTES, STEATITE; IODINE, MICA, TALC.			
Furnaces - - - - - (*Communicated by Hyppolite Godard-Desmarest.*)	84	9th Jan. 1863	Michael Henry.
Manufacture of caustic soda and potash, and carbonates, chromates and stannates of the same alkalies - - - - -	91	10th Jan. 1863	Edward Powers. John Gallemore Dale.
Manufacture of chlorine and bleaching powder, carbonate of soda and soda ash, and sulphate of iron. (*Communicated by Thomas Macfarlane.*)	126	14th Jan. 1863	William Johnson.
Manufacture of sulphate of soda for conversion into soda and other uses. (*Communicated by Germain Adolphe Thibierge.*)	162	19th Jan. 1863	Richard Archibald Brooman.
Improvements in the treatment of steatite and in its application to certain purposes - -	450	18th Feb. 1863	John Gray. Joseph Hudson.
Manufacture of carbonate of magnesia and of iodine and kelp salt and other products from kelp.	521	25th Feb. 1863	William Readman.
Manufacture of potash alum and other salts of potash.	543	26th Feb. 1863	Peter Spence.
Improvements in treating seaweed and in apparatus therefor.	607	4th March 1863	Edward Alfred Wünsch.
Treatment of rags and obtaining valuable chemical products from the animal fibre therein. (*Ammonia.*)	731	18th March 1863	William Lorberg.
Separation or obtaining of ammonia from azoted matters in the preparation of manure. (*Communicated by Lucien Henry Blanchard and Théodore Chateau.*)	761	21st March 1863	William Clark.
Improvements in the manufacture of baryta and its derivatives, in obtaining by-products, and in revivifying or recovering certain agents employed in such manufacture. (*Communicated by Julien Gabriel Lelong Burnet.*)	878	7th April 1863	Richard Archibald Brooman.
Treating the waste liquors from bleaching powder stills in order to obtain hydrochloric acid and other products therefrom. (*Chlorides of alkalies.*)	967	17th April 1863	Robert Calvert Clapham.
Manufacture of sulphate of soda - - -	1012	23rd April 1863	Thomas Richardson. James Cochran Stevenson.
Manufacture of hydrocyanate of ammonia and of alkaline and earthy cyanides. (*Communicated by Louis Joseph Frédéric Marqueritte.*)	1039	30th April 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
ALKALIES, &c.—*continued.*			
Improvements in obtaining and purifying oxalate of soda, which improvements are also applicable to the manufacture of oxalic acid.	1116	5th May 1863	William Walsh.
Improvements in the manufacture of hydrate of barytes and in the manufacture of sugar.	1205	13th May 1863	Karl Ludwig Heusner.
Treating the waste liquor obtained in the preparation of esparto grass - - - -	1342	28th May 1863	Thomas Richardson. Robert Irvine.
Manufacture of hyposulphite of soda, sulphite of soda and sulphite of lime.	1638	1st July 1863	Robert Calvert Clapham.
Manufacture of alum - - - -	1695	8th July 1863	Henry Armstrong.
Manufacture of sodium - - - - (*See* "METALS.")	1763	14th July 1863	Edward Sonstadt.
New employment of magnesia and its combinations in manufactures. (*Soda, potash and their sulphates.*)	1776	15th July 1863	Doctor Christian Gustav Clemm.
Treatment and utilization of certain of the waste products from the manufacture of alkali and bleaching powder, and also from certain smelting operations.	1860	25th July 1863	Charles Crockford.
Manufacture of size, glue and phosphates - -	1914	3rd Aug. 1863	Balthazar Wilhelm Gerland.
Apparatus for evaporating and distilling - - (*Sulphate of soda.*)	2106	26th Aug. 1863	Jacques Louis Kessler.
A method of preparing mica and talc in order to render them applicable to articles of wearing apparel and to ornamental purposes.	2154	31st Aug. 1863	George Brooks Pettit.
Means of utilizing refuse azoted matters of commerce for the manufacture of various chemical products. (*Ammonia, prussiates and carbonates of soda, &c.*) (*Communicated by Amédée Gélis and Lucien Dusart.*)	2222	9th Sept. 1863	William Clark.
Treatment of rags and obtaining valuable chemical products from the animal fibre therein. (*Obtaining ammonia, &c.*)	2294	18th Sept. 1863	William Lorberg.
Utilizing the waste flux from galvanizing works - (*Obtaining muriate of ammonia.*)	2356	24th Sept. 1863	James Webster.
Production of sulpho-cyanide of ammonium and other sulpho-cyanides. (*See* "METALLIC SALTS.")	2364	25th Sept. 1863	Peter Spence.
Manufacture of soda - - - -	2422	2nd Oct. 1863	James Bowron. George Robinson.
Making aluminate of soda and other aluminous salts.	2571	20th Oct 1863	William Adam Dixon.
Treating natural phosphates of lime for agricultural purposes.	2724	4th Nov. 1863	Guillaume Ville.
Manufacture of nitrate of potash - - -	2758	6th Nov. 1863	Joseph Townsend.
Improvements in preparing materials useful in the purifying of gas from sulphuretted hydrogen, carbonic acid and ammonia, and in making ammoniacal compounds.	2971	26th Nov. 1863	Richard Laming.
Separating sulphur from alkali waste - -	3009	1st Dec. 1863	Benjamin Jones.
Manufacture of soda and sulphuric acid - -	3044	3rd Dec. 1863	James Bowron. George Robinson.
Apparatus by means of which the formation of carbonates of soda by direct combination is rendered practically available for manufacturing purposes.	3131	11th Dec. 1863	Ernest Solvay.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
ALKALIES, &c.—*continued.*			
Manufacture of super-phosphate of lime - -	3152	14th Dec. 1863	John Wright.
Manufacture of chromate of potash, chromate of soda and other salts of chrome and soda and potash.	3160	14th Dec. 1863	William Henry Thornthwaite.
Improvements in utilizing the waste liquors resulting from the preparation of fibrous matters in paper pulp making, and in the machinery or apparatus to be used therein - - - (*Recovering carbonate of soda.*)	3168	15th Dec. 1863	Henry Chadwick. John Clench.
Improvements in the manufacture of iron and steel, and in the machinery, apparatus and furnaces used therein, and for the production and application of gas to be employed in such manufacture, and the application of parts of the said apparatus to the manufacture of glass and alkali.	3213	19th Dec. 1863	William Henry Tooth.
Manufacture of caustic soda and caustic potash -	3232	22nd Dec. 1863	James Shanks.
Kilns for calcining ironstone and limestone -	3273	29th Dec. 1863	John Gjers.
ANCHORS; WORKING ANCHORS; MOORING.			
Mooring buoys - - - - -	590	3rd March 1863	George Fosbery Lyster.
Anchors - - - - -	1060	29th April 1863	William Rodger.
Improvements in the construction of piers, walls and other similar structures, and of landing stages, and in the connections therewith or attachments thereto. (*Mooring landing stages.*)	1225	15th May 1863	Robert Trefusis Mallet.
Hawse pipes, mooring pipes and deck chain pipes -	1920	4th Aug. 1863	Thomas Hutchinson Baylis.
AXLES, SHAFTS, BEARINGS, JOURNALS, AXLE-BOXES, PACKINGS FOR AXLES; LUBRICATING AXLES, &c.			
Manufacture of wrought metal piles, columns and shafts.	20	2nd Jan. 1863	Joseph Emerson Dowson.
Certain improvements in steam-engines - -	23	3rd Jan. 1863	Harry Jones.
Manufacture of bearings and axle-boxes for machinery carriages and railway rolling stock.	25	3rd Jan. 1863	William Philippi.
Certain improvements in the construction of carding engines - - - - - (*Adjustable bearings.*)	168	20th Jan. 1863	John Bell. John Speight.
Securing axles and axle-boxes - - -	259	28th Jan. 1863	Eugene Gustavus Muntz.
Improvements in holster boxes or boxes for screws or pins to work in, and in the manufacture thereof.	340	6th Feb. 1863	Richard Dennis Tivnann.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AXLES, &c.—*continued.*			
Bearing surfaces of shafts and other axles - - (*Communicated by Nicolas Bailly and Charles Durand.*)	382	12th Feb. 1863	William Clark.
Construction of creels for warping machines and other machines to which creels are applied. (*Bushes.*)	398	14th Feb. 1863	Rowland Baguley.
Improved axle boxes for carriages or vehicles - (*Communicated by James A. Cramer.*)	451	19th Feb. 1863	Richard Percy Roberts.
Bearings and bushes of axles and shafts - -	503	24th Feb. 1863	John Watson Burton.
Carriages - - - - - -	656	9th March 1863	John Richardson Gorst.
Improvements in traction engines and in apparatus for indicating the pressure of steam.	669	11th March 1863	Andrew Barclay.
Lubricating horizontal shafting and bearings of all descriptions - - - - - -	769	24th March 1863	James Reilly. William Martin.
A new journal axle or bearing particularly applicable to rolls.	808	28th March 1863	Benjamin William Goode.
An improved axletree with linked levers for lifting -	812	28th March 1863	Alfred Blouin. Didier Nicolas Mercier.
An improved method of lubricating - - (*Communicated by Edwin P. Quadling.*)	838	1st April 1863	Michael Henry.
Machinery for hammering, rolling and shaping metals. (*Shafts.*)	924	13th April 1863	John Ramsbottom.
Improvements in wheels and axles applicable to locomotives, carriages and paddle wheels.	975	18th April 1863	William Benoni Burden.
A new compound to be used as a lubricator - (*For bearings.*)	1020	24th April 1863	Robert Lavender.
A new lubricating material or compound - -	1217	14th May 1863	Frederick Keate Erlam.
Construction of self-lubricating bearings for shafts and axles - - - - - -	1261	20th May 1863	Henry Wren. John Hopkinson.
Improvements in velocipedes and in the construction of wheels for the same and other carriages.	1280	21st May 1863	Joseph Goodman.
Manufacture or preparation of lubricating material. (*Communicated by François Janssens.*)	1355	29th May 1863	John Henry Johnson.
An improved mode of oiling journals or axles - (*Communicated by Henry Wood.*)	1478	13th June 1863	George Davies.
Improvements in lessening the friction of the rubbing surfaces of the slide valves of engines and of the journals of shafts - - -	1583	23rd June 1863	William Louis Winans. Thomas Winans.
Improvements in couplings for hose pipes, and also in connecting axles to the naves or bosses of wheels. (*Communicated by Edmund Blodget Jucket.*)	1617	27th June 1863	Edward Thomas Hughes.
Wheels and their tires, axles and axle-boxes -	1674	6th July 1863	William Bridges Adams.
Improvements applicable to the rollers of machines employed for spinning fibrous materials whilst in a wet state. (*Protecting the journals.*)	1765	14th July 1863	James Logan Todd.
An improved rotary pump - - -	1975	11th Aug. 1863	Edward Myers. Hugh Forbes.
Improvements in axles, axle-boxes and the parts of wheels immediately connected therewith.	2018	14th Aug. 1863	Willam Asbury.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AXLES, &c.—*continued.*			
Improvements in lubricating and in arrangements and mechanism for lubricating the bearings, journals or steps of spindles, shafts, axles and other mechanism.	2043	17th Aug. 1863	James Stead Crosland.
Arrangement or fixing of axles for railway and other carriages.	2155	31st Aug. 1863	Martyn John Roberts.
Improvements in the application of rolling friction to the axle-boxes and journals of running shafts, and axletrees of machines and vehicles of all descriptions, for lessening the resistance to the motion. (*Partly communicated by Charles Durand.*)	2177	3rd Sept. 1863	Nicolas Bailly.
Improvements in lubricating journals of revolving shafts and axles, and in the apparatus employed for that purpose - - - -	2343	23rd Sept. 1863	William Galloway. John Galloway.
Packing for stuffing-boxes and pistons - -	2415	2nd Oct. 1863	James Tees.
Lubricating the axles of railway carriages - - (*Communicated by Joseph Wood.*)	2419	2nd Oct. 1863	William Augustus Torrey.
Improvements in taps or cocks, part of which improvements is applicable to the lubrication and protection of the journals of revolving shafts, axles or spindles.	2492	12th Oct. 1863	Alexander Inglis.
Certain improvements in bearings for axles for railway or other carriages.	2499	12th Oct. 1863	Thomas Gidlow.
Machinery or apparatus for preparing, spinning and doubling cotton, flax, wool and other fibrous materials. (*Bearings of spindles.*)	2552	19th Oct. 1863	James Champion.
Machinery for bending plates for iron ships and other like purposes. (*Bearings.*)	2574	20th Oct. 1863	George Heaton Daglish. Thomas Windus.
An improved apparatus for the lubrication of bearings, shafts or other parts of machinery subject to friction.	2723	4th Nov. 1863	Pierre Augustin Sautreuil.
Axle-boxes - - - - - (*Partly communicated by Eugene Thetard.*)	2759	6th Nov. 1863	Walter Montgomerie Neilson.
Improvements in machinery for ginning and cleaning cotton, a part of which are applicable to machines for other purposes.	2765	7th Nov. 1863	Horace Leeman Emery.
Wheels, tires, axles and axle-boxes, and modes of applying them.	2896	19th Nov. 1863	William Bridges Adams.
Machinery for preparing cotton to be spun -	2906	19th Nov. 1863	Richard Walker John Scholes Walker. Benjamin Brown.
Improvements in testing or measuring the strength and other properties of various materials and structures, and in apparatus therefor. (*Shafts.*)	297	26th Nov. 1863	David Kirkaldy.
Improvements in lubricating the shafts of the conducting pulleys of mules, which improvements are also applicable to machinery in general.	3028	2nd Dec. 1863 - -	Thomas Thornber England.
Metallic packings - - - - -	3088	8th Dec. 1863	Theophilus Alexander Blakely.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
AXLES, &c.—*continued.*			
Improvements in oil cans and in apparatus for lubricating. (*Shafts.*)	3215	21st Dec. 1863	William James Dixon.
For Bearing-springs,—*see* "SPRINGS."			
BAGS, BASKETS, WALLETS AND FASTENINGS.			
Manufacture of elastic fabrics - - - (*Springs for bags and pouches.*)	4	1st Jan. 1863	Matthias Edward Bowra. Arthur Edward Francis.
An improved fastening for bags and other articles -	88	10th Jan. 1863	Maurice Vogl.
Locks - - - - - - - (*For travelling bags.*)	347	7th Feb. 1863	Claude Parigot. Antoine Grivel.
An improved fastening for purses, portemonnaies, pocket-books, bags, reticules and such like purposes.	383	12th Feb. 1863	Samuel Henry Phillips.
Articles or means for supporting or carrying ladies' parasols, bags or other articles or appendages.	743	20th March 1863	Richard Couchman.
Pocket-books, purses, wallets and bill cases -	792	26th March 1863	William Johnson.
Casings, covers or wrappers for bottles, jars and other articles.	854	2nd April 1863	Anton Bruno Seithen.
Apparatus for preserving property in case of shipwreck. (*Communicated by George Mitchell.*)	1067	28th April 1863	John Henry Johnson.
Manufacture of certain articles to be used for preserving life at sea and other purposes. (*Carpet bags.*)	1263	20th May 1863	Walter John Colin Lang.
Improvements in the manufacture of paper bags and in the machinery employed therein.	1476	12th June 1863	George Davidson.
Improvements in the ornamentation of silver, German silver, Britannia metal, electroplated or other plated goods. (*Baskets.*)	1595	24th June 1863	Thomas Skinner.
Fastenings for cigar cases, portemonnaies, bags and other like articles.	1909	1st Aug. 1863	Edmund Sutton.
Street pillar letter-boxes and bags for the reception of post letters.	1999	13th Aug. 1863	Henry Winchcomb.
Locks or fastenings - - - - - - (*For travelling bags.*)	2013	14th Aug. 1863	Frederick John Jones.
An improvement in hinges - - - (*For bags.*)	2269	16th Sept. 1863	Alfred Watson.
Articles or instruments for supporting, holding or carrying parasols, bags, watches, ornaments or other articles or appendages.	2309	19th Sept. 1863	Richard Couchman.
An improved "sample" bag for postal and other purposes.	2507	13th Oct. 1863	George Morgan.
Improvements in the manufacture of purses, pocket-books and wallets, and in the construction of double action locks for the same and other similar purposes.	2565	20th Oct. 1863	James Michaelis.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BAGS, &c.—*continued.*			
An improved clasp or fastening for gloves or other wearing apparel, for umbrellas, travelling bags or other similar objects.	2631	24th Oct. 1863	Louis Joseph Hannart.
Manufacture of nose-bags - - - - -	2636	26th Oct. 1863	Richard Littleboy.
Locks for bags - - - - - -	2637	26th Oct. 1863	Bernhard Steinmetz.
An improvement in clasps for portemonnaies, pocket-books, bags and other like uses. (*Communicated by Paul Claparede.*)	2666	28th Oct. 1863	Henri Adrien Bonneville.
An improvement in or addition to military knapsacks, travelling bags, and other similar articles. (*Communicated by Antoine Perrin, Henry Augustin Joseph Hovelacque, Edouard Joseph Hovelacque and Emile August Hovelacque.*)	2669	28th Oct. 1863	Michael Henry.
Manufacture of sacks, bags and garments without seam.	2937	21st Nov. 1863	Antoine Simoneton.
Construction of letter, tourist, despatch and other similar bags or receptacles.	3004	30th Nov. 1863	John Edward Blundon. Edward Henry Blundon.
Improvements in the manufacture of purses, bags and other similar articles, and in fastenings for the same. (*Communicated by Ignatz Lindenblith.*)	3280	28th Dec. 1863	William Clark.
BATHS AND BASINS.			
Construction of air-tight boxes, cases, cupboards and similar vessels. (*Baths.*)	276	29th Jan. 1863	Frederick George Stuber.
An improved bath or bathing machine adapted for deep water.	676	12th March 1863	Louis Desens.
Improvements in swimming baths and in apparatus for swimming, part of which apparatus is applicable to sailing or moving vessels in a circle.	715	17th March 1863	John Cox.
Apparatus for generating carbonic acid - - (*May be applied in baths.*)	732	18th March 1863	Auguste Morel.
Improvements in apparatus for manufacturing beton and artificial stone, pugging clay and other similar purposes, and in the production of artificial stone, and artistic, ornamental and decorative articles, works and surfaces. (*Basins.*) (*Communicated by François Coignet.*)	1066	29th April 1863	Michael Henry.
An improvement in baths - - - - -	1545	20th June 1863	David Dunne Kyle.
An improved bath or bathing machine adapted for deep water.	2238	11th Sept. 1863	Louis Desens.
Improvement in taps, cocks, hydrants or valves and apparatus connected therewith, for opening, closing, regulating and facilitating and otherwise controlling the passage or flow of water, air, steam, gas and other fluids and liquids. (*For baths.*)	2432	5th Oct. 1863	Charles Tomlinson.
Vapour bath apparatus - - - - -	2473	9th Oct. 1863	Louis Lefebvre.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BATHS, &c.—*continued.*			
Apparatus for drying plates and other articles of china and earthenware. (*Ewers and basins.*)	2761	6th Nov. 1863	Colin Minton Campbell.
Apparatus for regulating and controlling the supply of water to water-closets and other purposes. (*Regulating supply to wash-basins.*)	2801	11th Nov. 1863	Thomas Mellard Reade. Joshua Hewitt.
BAYONETS, SWORDS AND MATCHETS; SWORD HILTS; SHEATHS FOR STAVES.			
Means or apparatus for shaping, rolling or compressing metal. (*Bayonets*).	296	2nd Feb. 1863	William Charles Barnes.
Manufacture of matchets and swords	418	16th Feb. 1863	John Burchley Watts.
An improved construction of offensive weapon (*Communicated by James Cameron Campbell.*)	902	9th April 1863	Alfred Vincent Newton.
An improvement in steel sword hilts	954	16th April 1863	John Burchley Watts.
Offensive and defensive arms (*Communicated by Celestin Dumonthier.*)	1329	27th May 1863	William Clark.
Manufacture of sheaths or cases for staves or other similar weapons.	1913	3rd Aug. 1863	John William Parker Field.
Improvements in breech-loading fire-arms and in bayonets and cartridges connected with the same.	2883	18th Nov. 1863	Rudolph Mayer.
Apparatus for forging and tempering bayonet blades, files and other articles. (*Communicated by Hervey Waters.*)	3251	23rd Dec. 1863	George Tomlinson Bousfield.
BELLS; ACTUATING BELLS.			
Manufacture of bells and of resisting and non-cutting tools. (*Communicated by Henri Micolon.*)	1302	23rd May 1863	Richard Archibald Brooman.
Apparatus for actuating domestic bells and other signals by the electric current.	1596	24th June 1863	Andrew Edmund Brae.
A new metallic alloy (*For making bells.*) (*Communicated by Henri Micolon.*)	2086	22nd Aug. 1863	Richard Archibald Brooman.
BELTS, BRACES, GIRTHS AND BANDS.			
Manufacture of elastic fabrics (*Springs of belts and braces.*)	4	1st Jan. 1863	Matthias Edward Bowra. Arthur Edward Francis.
Voltaic belts and bandages (*Communicated by Florent Babin.*)	662	11th March 1863	Richard Archibald Brooman.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BELTS, &c.—*continued.*			
An "all England's cricketer's" clasp	710	17th March 1863	John Henry Brierley. Barzillai Greenwood.
An album belt	711	17th March 1863	John Henry Brierley. Barzillai Greenwood.
Girths or bands and knee caps for horses	730	18th March 1863	Frederick Norrington.
Articles or means for supporting or carrying ladies' parasols, bags or other articles or appendages.	743	20th March 1863	Richard Couchman.
Apparatus for the preservation of life from drowning	1598	25th June 1863	Callistus Augustus Count de Goddes de Liancourt.
A new or improved dress fastening, which said fastening may also be applied to the fastening of braces, belts and other bands, and to other like purposes.	2001	13th Aug. 1863	Thomas Ashwin.
Manufacture of cement (*For uniting leather belting.*) (*Communicated by Samuel Hilton.*)	2034	15th Aug. 1863	George Tomlinson Bousfield.
A new or improved dress fastening, which said fastening is also applicable to the fastenings of bands and belts, and to other like purposes.	2204	8th Sept. 1863	Joseph Horatio Cutler.
An improved method of uniting belts and lengths of wire gauze and other metal cloth. (*See* "STRAPS.")	2249	12th Sept. 1863	Ebenezer Noah Gregory.
Life belts and swimming belts (*Communicated by Torrilhon Verdier and Company.*)	2286	17th Sept. 1863	John Henry Johnson.
Articles or instruments for supporting, holding or carrying parasols, bags, watches, ornaments or other articles or appendages.	2309	19th Sept. 1863	Richard Couchman.
Buckles for brace and other dress fastenings	3081	8th Dec. 1863	John Henry Brierley.
BLEACHING AND DECOLOURISING.			
Method of and apparatus for purifying, bleaching and refining oils and oily and fatty matters.	26	3rd Jan. 1863	Stephen White.
Manufacture of chlorine and bleaching powder, carbonate of soda and soda ash, and sulphate of iron. (*Communicated by Thomas Macfarlane.*)	126	14th Jan. 1863	William Johnson.
Certain improvements in preparing and bleaching "rhea" and other fibrous materials and fibres, which improvements are also applicable to bleaching yarns or piece goods	300	3rd Feb. 1863	Charles Smithies. George Lancelot Smithies.
Apparatus and processes for steeping, boiling, washing, bleaching and dyeing fibrous materials, or slivers, slubbings, rovings, yarns or woven fabrics of the same	367	10th Feb. 1863	William Whitaker. William Tongue.
Treatment of rags and obtaining valuable chemical products from the animal fibre therein.	731	18th March 1863	William Lorberg.
Improvements in bleaching and in reducing and brightening the colour or tone of dyed straw plaits and straw	733	18th March 1863	John Davis Welch. Alfred Phippen Welch.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BLEACHING, &c.—*continued.*			
Bleaching jute fibre - - - - - -	780	25th March 1863	George Stuart.
Preparing and bleaching jute and other vegetable fibres for spinning and other purposes.	886	8th April 1863	Thomas Gray.
Improvements in preparing and bleaching flax, hemp and other vegetable fibres, by which a brilliant lustre is imparted to those substances and the fibres are separated.	945	15th April 1863	Thomas Gray.
Treating the waste liquors from bleaching powder stills in order to obtain hydrochloric acid and other products therefrom.	967	17th April 1863	Robert Calvert Clapham.
Machinery and apparatus for stretching and drying cotton and other fabrics or materials.	1306	25th May 1863	James Hesford.
Improvements in treating flax, hemp and other vegetable fibrous substances in order to bleach and separate the fibres.	1403	5th June 1863	Thomas Gray.
Treatment of broom for the manufacture of paper pulp. (*Communicated by Louis Alexandre Joseph Deplanque.*)	1559	20th June 1863	William Clark.
Improvements in the treatment and utilization of certain of the waste products from the manufacture of alkali and bleaching powder, and also from certain smelting operations.	1860	25th July 1863	Charles Crockford.
Bleaching certain vegetable fibres used for textile or other purposes, whether in the raw state or manufactured.	1899	31st July 1863	Alexander Robertson Arrott.
Treatment of rags and obtaining valuable chemical products from the animal fibre therein.	2294	18th Sept. 1863	William Lorberg.
Apparatus for washing, scrubbing, scouring, bleaching and discharging impurities or other matters from woven or other fibrous materials.	2515	14th Oct. 1863	John Rowley.
Improvements in treating ligneous substances, in separating and recovering the fibrous portions therefrom, in preparing, bleaching and sizing the same, and in machinery employed therein. (*Communicated by Pierre Celestin Victor Baud and Theodore Casimir Delamarre.*)	2587	21st Oct. 1863	Richard Archibald Brooman.
A new method of discharging color from rags used for paper making or other purposes, and in treating of vegetable fibres by such process.	2980	27th Nov. 1863	Thomas Gray.
BOBBINS AND COP-TUBES.			
Means or apparatus employed in spinning and weaving. (*Tubes for yarn.*)	139	15th Jan. 1863	John Wright Child.
Improvements in the manufacture of braid, and in machinery or apparatus employed therein. (*Communicated by Thomas James Sloan.*)	257	28th Jan. 1863	John Henry Johnson.
Spools, bobbins, rollers and similar articles - -	496	24th Feb. 1863	Henry Masters.
Paper spools or tubes used in spinning and doubling machines. - - - - -	1266	20th May 1863	Thomas Williams. Isaac Naylor.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BOBBINS, &c.—*continued.*			
An invention having reference to bobbins and the winding of roving or yarn thereon.	1599	25th June 1863	Daniel Hussey.
Machinery for the manufacture of yarns, threads, laid twine and other cordage - - - - (*Tapering bobbins.*)	1886	30th July 1863	Joseph Thompson Stephens. Charles Hoare.
Machinery for making paper tubes used in spinning manufactories.	2366	25th Sept. 1863	Mathias Schaffhauser.
Machinery or apparatus for preparing, spinning and doubling cotton, flax, wool and other fibrous materials.	2552	19th Oct. 1863	James Champion.
Paper spools or tubes used in spinning and doubling machines - - - - -	2860	14th Nov. 1863	Thomas Williams. Isaac Naylor.
Manufacture of paper spool tubes - -	2983	27th Nov 1863	Charles Crabtree.
A holder or suspender for holding cotton and other reels, spools or balls, parts of which are also applicable for other useful purposes.	3224	21st Dec. 1863	Edwin John Green. Richard Mason.
BONES, IVORY, PEARL AND SHELL.			
Ornamentation of papier mâché or other japanned wares, wood, ivory or other similar materials.	1145	7th May 1863	John Bettridge.
An improved mill for grinding bones, grain, logwood and such like substances.	1883	30th July 1863	George Inskeep.
Manufacture of size, glue and phosphates - -	1914	3rd Aug. 1863	Balthazar Wilhelm Gerland.
Improvements in machinery for amalgamating or intermixing dry, semifluid or aqueous materials, and for agitating solids with liquids, for combining, dissolving or washing the same. (*Phosphating bones, &c.*)	2947	23rd Nov. 1863	Thomas Carr.
Improvements in grinding pearl, and which said improvements are also applicable for grinding other materials. (*Tortoise shell, &c.*)	3157	14th Dec. 1863	Samuel Edwards.
BOOKS, ALBUMS, ALMANACKS AND LETTERS; BOOK COVERS; BOOK SLIDES OR HOLDERS; BOOKBINDING.			
An improved fastening for purses, portemonnaies, pocket-books, bags, reticules and such like purposes.	383	12th Feb. 1863	Samuel Henry Phillips.
Machinery or apparatus for folding paper and other fabrics or materials. (*For bookbinding.*)	532	25th Feb. 1863	James Inglis.
Book slides or holders - - - -	548	26th Feb. 1863	Frederick Henry Twilley.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BOOKS, &c.—*continued.*			
Improvements in apparatus for winding, cleaning, measuring, sorting, doubling, throwing and reeling silk, parts of which improvements are also applicable to like machinery for spinning, doubling and twisting cotton, wool and other fibrous materials. (*Or weighing and sorting letters.*)	674	12th March 1863	Frederick Buser-Kraushaar.
Pocket-books, purses, wallets and bill cases -	792	26th March 1863	William Johnson.
Apparatus for ruling paper and other materials either alone or in combination with typographical or lithographical printing. (*Ruling registers, &c.*) (*Communicated by Bonaventure Tournier.*)	1320	25th May 1863	William Clark.
Clips or holders for inserting and fixing photographic pictures in albums.	1434	9th June 1863	John Murray.
A new or improved daily balance book with moveable or sliding tickets or slips. (*Communicated by Emile Cauderon.*)	1455	11th June 1863	Charles Louis Van Tenac.
Improvements in apparatus for turning over the leaves of music and other books.	1551	20th June 1863	James Langdon Clarke.
Manufacture of covers for purses, wallets and pocket-books - - - - - -	1856	25th July 1863	George Henry James. James Marshall James. Josiah James.
An improved method of and apparatus for inserting pictures in and withdrawing them from photographic albums.	2085	22nd Aug. 1863	Alfred Watson.
A new division of time and the application thereof to mathematical and other instruments. (*Applicable to almanacks.*)	2107	26th Aug. 1863	Santini Fattorini.
Improvements in the manufacture of purses, pocket-books and wallets, and in the construction of double action locks for the same and other similar purposes.	2565	20th Oct. 1863	James Michaelis.
An improvement in clasps for portemonnaies, pocket-books, bags and other like uses. (*Communicated by Paul Claparede.*)	2666	28th Oct. 1863	Henri Adrien Bonneville.
An apparatus applicable to time, fare, distance and other tables, almanacs, arithmetical calculations, postal and other boxes.	2882	18th Nov. 1863	Thomas Christoper Kimpton.
BOOTS, SHOES, LEGGINGS, SKATES AND CLOGS; BLACKING.			
Manufacture of elastic fabrics - - - - (*Springs of boots and shoes.*)	4	1st Jan. 1863	Matthias Edward Bowra. Arthur Edward Francis.
Construction of boots, shoes and other coverings for the feet - - - - - -	11	1st Jan. 1863	John Edward Baker. James Landon.
Skate fasteners - - - - - (*Communicated by Thomas Hope.*)	63	7th Jan. 1863	George Tomlinson Bousfield.
India-rubber over-shoes or goloshes - -	111	13th Jan. 1863	Lucien Lescuyer.
Improvements in the soles and heels of boots and shoes, in studs, nails, tips and toe or other plates used therewith, and in placing and securing them.	116	14th Jan. 1863	William Pidding.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
Boots, &c.—*continued.*			
Improved machinery or apparatus for fastening by screws boots, shoes and other articles composed of leather. (*Communicated by Henry Chrétien Cordes and Leonard Wainschenck.*)	246	28th Jan. 1863	William Edward Gedge.
Improvements in the manufacture of boots and shoes, and in preparing india-rubber for such and other uses. (*Communicated by Daniel Hayward.*)	448	18th Feb. 1863	George Tomlinson Bousfield.
Manufacture of boots and shoes - - (*Communicated by Henry Port.*)	734	19th March 1863	George Haseltine.
Manufacture of boots, shoes or other coverings for the feet - - - - - -	936	14th April 1863	William Keats. John Keats.
An improvement in waterproof compounds and in fabrics prepared therewith. (*For boots and shoes.*)	988	21st April 1863	Edwin Lindsey Simpson.
Shoes, boots and other coverings for the feet - (*Communicated by Jesse Follett.*)	1002	22nd April 1863	Henri Bernoulli Barlow.
Tanning hides and skins - - - - (*For boots.*) (*Communicated by Jean Baptiste Vanrymenant.*)	1157	8th May 1863	Evariste Chamonin Boët.
Improvements in nails or rivets for boots and shoes, applicable to other purposes - -	1211	14th May 1863	John Satchwell. William Henry Ashford. Cornelius Harrison.
Manufacture of boots and shoes - - -	1227	15th May 1863	Joseph Papin. Charles Lintz. Leon Lavacherie.
Manufacture of elastic material - - - (*For boots.*) (*Communicated by Gustave Mayer.*)	1229	16th May 1863	Benjamin Browne.
Machinery for making screw rivets, nails or pins - (*For boots.*)	1246	18th May 1863	Samuel Toy.
The preparation of a fluid for renewing the surface of japanned and enamelled leathers and cloths. (*Boots.*)	1298	23rd May 1863	William Hoey.
Improvements in boots and shoes or similar coverings for the feet, and in the manufacture thereof.	1373	2nd June 1863	Abraham Illingworth.
Tools or apparatus for paring, rasping and scraping the edges of boot and shoe soles and heels.	1417	8th June 1863	Edwin Arthur Schofield.
Improvements in preparing and fashioning iron applicable to the manufacture of boot heels, tips and horse shoes, and in part of the machinery or apparatus to be employed therein.	1576	23rd June 1863	Alexander Richmond Stocker.
An improved waterproof material - - - (*For manufacture of boots and shoes.*) (*Communicated by Jules Wiese.*)	1635	1st July 1863	William Snell.
Boots and shoes - - - - -	1642	1st July 1863	Hiram Hutchinson.
Manufacture of boots and shoes - - -	1656	3rd July 1863	Charles Baulch.
A new method of waterproofing and ventilating boots, shoes and slippers, for preventing wet and damp feet - - - - -	1700	8th July 1863	Rebecca Tallerman. Lewis Abraham Tallerman.
Improvements in the manufacture of elastic boots and shoes, and in apparatus used therefor -	1783	16th July 1863	Lister Priestley. Joseph Longley Todd.
Manufacture of hollow cutting tools - - (*For use of shoemakers.*)	1806	20th July 1863	William Simpson. John Hutton.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
Boots, &c.—*continued.*			
Gaiters and leggings	1854	24th July 1863	Bernard Birnbaum.
Manufacture of boots and shoes	1898	31st July 1863	John Farmerley Dickson.
An improved fastening for leggings	1974	11th Aug. 1863	Edward Siegmund Simon.
Manufacture of cement (*For uniting leather for boot soles.*) (*Communicated by Samuel Hilton.*)	2034	15th Aug. 1863	George Tomlinson Bousfield.
Improved arrangements of the parts in sewing-machines for using shoemaker's wax thread, suitable for heavy boot or other leather work to which it may be applied.	2057	19th Aug. 1863	William Jackson.
An improved fastening for leggings, stays or other articles.	2062	19th Aug. 1863	Simon Sanderson.
Construction of skates	2131	29th Aug. 1863	Henry Cholmondeley Pennell.
A new or improved method of adapting steel or other suitable metallic wire to be used instead of animal bristles or hair in sewing boots, shoes, saddlery and leather works generally.	2183	4th Sept. 1863	Charles Thornhill.
Metallic instruments to be used as substitutes for bristles in sewing, stitching, closing and otherwise joining boots and shoes and other leather work	2352	24th Sept. 1863	Thomas Marshall. William Marshall.
Joining leather (*For boots and shoes.*) (*Communicated by Toussaint Landrin.*)	2361	24th Sept. 1863	Henri Adrien Bonneville.
An improved slipper or clog principally intended for bath rooms.	2362	25th Sept. 1863	Clemence de Wailly.
Improvements in the manufacture of boot and shoe toe pieces or tips, and in the machinery or apparatus employed therein. (*Communicated by the American Shoe Tip Company.*)	2382	28th Sept. 1863	John Henry Johnson.
An improvement in the soles of boots and shoes (*Communicated by Theodore Gustave Eiswald.*)	2389	29th Sept. 1863	William Clark.
Manufacture of boots and shoes	2411	1st Oct. 1863	James John Anderton.
Manufacture of boots and shoes	2426	3rd Oct. 1863	Thomas Fagg. Jesse Fagg.
Machinery for cutting and finishing the edges of the soles and heels and the bottoms of boots and shoes.	2505	12th Oct. 1863	James John Anderton.
A new apparatus for rubbing off or removing the dust or dirt from boots or shoes.	2529	15th Oct. 1863	Baldwin Fulford Weatherdon.
An improved composition for rendering boots and shoes and other similar articles waterproof. (*Communicated by Louis Poncelet.*)	2553	19th Oct. 1863	Henry Gilbee.
Shoes, boots and other coverings for the feet (*Communicated by Jesse Follett.*)	2570	20th Oct. 1863	Henry Bernoulli Barlow.
Improvements in the manufacture of saddles and harness, and in materials for and in ornamenting the same, which improvements are applicable for parts of carriages, dress and coverings for the head, and other articles. (*Stiffening boots and shoes.*)	2579	21st Oct. 1863	Thomas Charles Clarkson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
Boots, &c.—*continued.*			
An improved clasp or fastening for gloves or other wearing-apparel, for umbrellas, travelling bags or other similar objects. (*For leggings.*)	2631	24th Oct. 1863	Louis Joseph Hannart.
Certain improvements in boots, shoes, clogs and such like coverings for the feet.	2651	27th Oct. 1863	Thomas Grason.
Improvements in self-acting machinery or apparatus worked by steam or other power for cutting and shaping the soles and heels of boots and shoes, and screwing them on to the uppers or coverings, and also in vices for holding the same, and tools for paring, blacking and glazing or otherwise ornamenting the edges of the soles and heels - - - - -	2755	6th Nov. 1863	Charles Henry Southall. Robert Heap.
Improvements in machinery to be used in the manufacture of heel tips and toe tips and toe plates for boots and shoes.	2789	10th Nov. 1863	George Yates.
Manufacture of boots and shoes - -	3068	7th Dec. 1863	John Hawkins Simpson.
Construction and mode of attaching of india-rubber and other composition soles to boots and shoes or to the uppers thereof. (*Communicated by Charles MacBurney.*)	3141	12th Dec. 1863	John Henry Johnson.
Making boots and shoes - - -	3150	14th Dec. 1863	Charles Stewart.
Shields or tips for boots and shoes - - (*Communicated by Horace Bearce.*)	3242	23rd Dec. 1863	John Henry Johnson.
Shields or tips for boots and shoes - - - (*Communicated by Horace Bearce.*)	3256	23rd Dec. 1863	John Henry Johnson.
Boring, Drilling, Riffling and Punching; Gimlets, Augers and Brace-bits.			
Improvements in the construction and mode of working apparatus to be employed in pressing, moulding, shaping, embossing, crushing, shearing and cutting metallic and other substances. (*And punching.*)	37	5th Jan. 1863	Henry Bessemer.
Machinery for punching and cutting metals - (*Communicated by Nicolas De Telescheff.*)	220	24th Jan. 1863	Marc Antoine François Mennons.
Shaping machines for curvilinear surfaces - -	265	29th Jan. 1863	James Mackenzie.
An improved boring bench for gun barrels - (*Communicated by Charles Berger.*)	332	6th Feb. 1863	Alexis Heintzmann. Theodore Anthony Rochussen.
Machinery for shearing, punching and rivetting metals.	369	11th Feb. 1863	Hugh Donald.
Apparatus for drilling wood, stone, iron or other materials. (*Communicated by Joseph Julien Chenal.*)	370	11th Feb. 1863	Edward Thomas Hughes.
Presses for punching or cutting out leather and other substances.	430	17th Feb. 1863	Josiah Gimson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BORING, &c.—*continued.*			
Improvements in ordnance and artillery and means of operating and mounting the same, and in projectiles and instruments therefor.	484	21st Feb. 1863	Norman Wiard.
A new method of and apparatus for boring into water and gas supply pipes, and fixing branch pipes thereon. (*Communicated by Edme Ernest Mathelin and Pierre Lucien Mathelin.*)	556	27th Feb. 1863	Richard Archibald Brocman.
Apparatus for cleaving and excavating pit coal and rock or earth.	560	27th Feb. 1863	Victor Désiré Delahaye.
Locomotive boring and winding engines - -	668	11th March 1863	Andrew Barclay.
Portable hydraulic punching machines - -	694	14th March 1863	Joseph Tangye.
Portable apparatus for working drills and other instruments - - - - - -	794	26th March 1863	William Tod. Robert Paterson.
Improved machinery for boring rocks and other hard substances.	903	9th April 1863	George Low.
Ratchet levers - - - - - (*For ratchet drills.*)	974	18th April 1863	Thomas Aldridge Weston.
Machinery for punching metals - - -	1024	24th April 1863	James Thompson.
Improved apparatus for fixing drills, which invention is also applicable for fixing apparatus for raising, supporting and suspending weights and for other analogous purposes.	1029	25th April 1863	Leopold De Breánski.
Improvements in the manufacture of and in the machinery and appliances for holding, drilling, turning, tapping, fitting and shaping certain parts of steam, water, gas and lamp fittings.	1041	25th April 1863	John Thomas Stroud.
Machinery for punching, stamping or forging metals.	1103	2nd May 1863	George Burt.
A new method of rifling guns and of forming projectiles to correspond therewith.	1286	22nd May 1863	Theophilus Alexander Blakely.
Improvements in apparatus for boring, mining and excavating or cutting, in motive-power engines, and in pressure gauges - - -	1322	26th May 1863	James Munro. Robert Scott.
An improved pneumatic hammer useful also for punching and stamping metals.	1457	11th June 1863	William Walton.
Machinery for manufacturing or preparing iron and other metal plates for shipbuilding and other purposes. (*Drilling and countersinking.*)	1604	25th June 1863	Henry Griffith Craig.
Construction of guns and projectiles, and of carriages, platforms and shields for working and protecting guns. (*Rifling.*)	1615	27th June 1863	George Clark.
Improvements in revolving shutters and blinds, and in apparatus for the manufacture of the same.	1803	18th July 1863	Alexander Clark.
Manufacture of hollow cutting tools - - (*Punches.*)	1808	20th July 1863	William Simpson. John Hutton.
Improvements in means or apparatus for closing, punching and rivetting hose pipes of leather or other substances, applicable also for punching and rivetting mill bands or driving straps and similar purposes.	1834	22nd July 1863	Charles Senior.
Boring apparatuses - - - -	1857	25th July 1863	Paul Etienne Gay.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BORING, &c.—*continued.*			
Improvements in fire-arms and in artillery and projectiles for the same.	1894	31st July 1863	John Coope Haddan.
Improvements in the construction and protection of ships, vessels and floating batteries, and in the preparation and arrangement of materials for those purposes, some of such improvements being applicable to the construction and protection of land fortifications. (*Perforation of armour plates.*)	1929	5th Aug. 1863	George Clark.
Improvements in the method of fastening hoops for packing bales and in the machinery or apparatus employed therein. (*Punching the apertures.*)	1967	10th Aug. 1863	John Alexander Fullarton.
Machinery for punching and for marking plates in which holes are to be punched.	2014	14th Aug. 1863	Matthew Hodgson Lishman.
Improvements in shaping and punching metallic articles, and in the machinery or apparatus to be employed therein. (*Communicated by Levi Dodge.*)	2113	26th Aug. 1863	David Blake.
Certain improvements in means to be employed for securing the ends of bands in packing "bale goods," and in machinery for manufacturing rivets to be employed for the purpose, and also in apparatus for forming apertures in the aforesaid bands or hoops - - - - -	2148	31st Aug. 1863	George Bebbington. Jonathan Robert Hampson.
Hydraulic apparatus - - - - - (*For piercing or perforating.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Improvements in machinery for morticing, drilling, dovetailing and cutting wood, and in tools to be used for morticing.	2202	7th Sept. 1863	Samuel Gerish. John Weston.
Perforating machines - - - - -	2496	12th Oct. 1863	John Heap.
Improved apparatus for boring and cleaving stone -	2531	16th Oct. 1863	James Polglase. Jonathan Cox.
Improvements in the manufacture of pecks, hoes, adzes and other edge tools, and in tools to be used in the said manufacture.	2564	20th Oct. 1863	Joseph Vaughan.
Machinery or apparatus for punching, shearing and burnishing.	2595	22nd Oct. 1863	John Craven. Samson Fox.
Machinery for drilling, boring or excavating rock or other earthy substances.	2624	24th Oct. 1863	Edward Smith Crease.
An improved machine for punching, shearing and rivetting metals.	2653	27th Oct. 1863	William Livingstone.
Machinery for punching, cutting and pressing metals and other materials.	2657	27th Oct. 1863	Edward Richard Hollands.
Machinery for cutting and boring coal, stone or other minerals.	2659	27th Oct. 1863	William Firth. Samuel Firth. John Sturgeon.
Construction and manufacture of ordnance, parts of which are applicable to small arms.	2876	17th Nov. 1863	Perceval Moses Parsons.
Improvements in the manufacture of barrels for fire-arms, and in machinery to be used in the said manufacture.	2887	19th Nov. 1863	Joseph Rock Cooper.
Improvements in "drifts" or tools used for enlarging holes, and in apparatus for making the same.	2897	19th Nov. 1863	John Eglin.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BORING, &c.—*continued.*			
Presses for cutting, perforating and shaping metals	2964	25th Nov. 1863	Thomas Wilson.
Guns and gun projectiles - - - -	2999	30th Nov. 1863	James Chalmers.
Improved apparatus for drilling or boring rock and other earthy substances, for exploring and other purposes.	3000	30th Nov. 1863	Enoch Watkin James.
Certain improvements in machinery for cutting and boring coal, stone or other minerals.	3066	7th Dec. 1863	William Firth. Samuel Firth. John Sturgeon.
An invention, firstly, for casting steam cylinders of steam-engines in the form of a segment of a cylindrical ring or circle, and, secondly, for the machine for boring them truly cylindrical and retaining the line of the bore on the curve of a true circle. (*Communicated by Samuel Woodruff and Henry B. Beach.*)	3103	9th Dec. 1863	William Henry Cole.
Portable hydraulic punching apparatus - -	3176	16th Dec. 1863	Edward Richard Hollands.
Ordnance, fire-arms and projectiles - - (*Rifling.*)	3194	18th Dec. 1863	Perceval Moses Parsons.
BOTTLES AND JARS; STOPPERS, CAPSULES AND CORKS; STOPPERING, CLOSING AND OPENING BOTTLES AND JARS; WINE GLASSES.			
Manufacture of capsules - - - - (*Communicated by Emile Barrault.*)	53	7th Jan. 1863	John Neale.
Manufacture of metallic vessels or receptacles for containing liquids or substances.	180	21st Jan. 1863	Frederick Augustus Busch.
Apparatus for applying metallic capsules to bottles	325	5th Feb. 1863	William Betts.
Securing the corks, stoppers or lids of bottles, jars and other similar vessels.	350	7th Feb. 1863	James Miller. Wilson Struthers.
Improvements in machinery for the cutting of chives, bungs, corks, spiles and vent or other pegs, and also in machinery for manufacturing the knives or cutters employed therein, such machinery being also applicable to the manufacture of trenails and other cylindrical and conical articles.	352	7th Feb. 1863	George Redrup.
An improvement or improvements in wine glasses -	453	19th Feb. 1863	William Sherwood.
Improvements in apparatus for stopping bottles, jars and other vessels, and in tools for producing parts of such apparatus.	458	19th Feb. 1863	Nathan Thompson.
Apparatus for generating carbonic acid - - (*For decanting and raising liquids.*)	732	18th March 1863	Auguste Morel.
Improvements in preventing fermentation in alcoholic and other liquids while drawing them from their containing vessels, and in apparatus for the same. (*Communicated by Charles Pierre Laurens, Adolphe Peret, and François de Trégomain.*)	839	1st April 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BOTTLES, &c.—*continued.*			
Preservation of perishable liquids during the withdrawal or consumption thereof.	844	1st April 1863	Robert Gavin.
Casings, covers or wrappers for bottles, jars and other articles.	854	2nd April 1863	Anton Bruno Seithen.
Construction of boxes or cases for carrying and packing bottles.	1134	6th May 1863	Thomas Beesley.
An improvement in the construction of portable wine cases or bins for domestic use or export, and a pic-nic chest combined.	1168	9th May 1863	Edward Rawson Clark.
Improvements in stoppers or bungs for closing or stopping bottles, jars and other vessels, and the muzzles of rifles, and for other like purposes. (*Communicated by Ferdinand Krauskopf.*)	1283	22nd May 1863	Charles Maschwitz the younger.
Covers or capsules for bottles, jars and similar vessels.	1294	23rd May 1863	John Alexander Pickering.
Manufacture of ornamental metal cylinders (*Cases for flasks.*)	1314	25th May 1863	Thomas Spurrier.
Apparatus for bottling liquids or for drawing or letting off at the same time liquids from several different casks or vessels.	1317	25th May 1863	Richard Hayward.
A new and useful hollow elastic stopper for bottles, jugs and other similar vessels.	1341	28th May 1863	Charles Francis Baxter.
Improvements in protecting or preserving the silvering or quicking on glass, and in the manufacture of glass vessels for silvering or quicking. (*Perfumery bottles and jars.*) (*Communicated by Joseph Jules Anthoine and François Etienne Hyppolite Brossette.*)	1512	16th June 1863	Richard Archibald Brooman.
Apparatus for aërating liquids (*Communicated by Frédéric Jean Greffier and Paul Dyé.*)	1609	26th June 1863	William Clark.
An improved cork cutting machine (*Communicated by Edward Borie and Alexander Mackie.*)	1619	29th June 1863	George Davies.
Improvements in stoppers and lids or covers for jars, bottles and other vessels, also in closing and fastening other articles.	1625	30th June 1863	Josiah George Jennings. Manuel Leopold Jonas Lavater.
Stoppers for bottles	1679	6th July 1863	Benjamin Bonfield.
Raising the covers or lids of hot-water jugs, teapots, coffee-pots and other vessels.	2216	9th Sept. 1863	Thomas Naden, the younger.
Improvements in apparatus for stopping bottles, jars and other vessels, which improvements are also applicable for stopping the muzzles of fire-arms.	2223	9th Sept. 1863	Nathan Thompson.
An improved bottle and stopper	2393	30th Sept. 1863	John James Chidley.
Improvements in the manufacture of metallic casks, bottles and other similar vessels, and in machinery employed therein.	2604	22nd Oct. 1863	Benjamin Noakes. Frederick John Wood.
Improvements in the manufacture of metallic capsules for bottles and similar vessels, and in the apparatus or means for applying or fixing such capsules thereon.	2623	24th Oct. 1863	William Betts.
An improved instrument for extracting corks from bottles.	2664	28th Oct. 1863	Stephen Procter.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BOTTLES, &c.—*continued.*			
Machinery for cutting corks, bungs, gun wads and other similar articles.	2754	6th Nov. 1863	William Davies. George Cate.
Apparatus for stopping bottles and other vessels -	2784	9th Nov. 1863	Nathan Thompson.
Construction of syphons for taking off liquid sewerage, overflow of rivers and other like purposes. (*Filling bottles.*)	2849	14th Nov. 1863	George Barker.
Improved modes of preventing accidents arising from the sale or use of poisons. (*Attaching labels to bottles.*)	2866	16th Nov. 1863	Gilbert Thonger.
An improved method or apparatus for affixing labels on bottles, canisters and other like articles.	2869	16th Nov. 1863	Andrew Pollock Henry. Richard Threlfall Power.
Cases for packing and storing bottles - -	3184	17th Dec. 1863	George Henry Ellis.
Improved apparatus for racking and decanting liquids, (termed "Laburthe's apparatus"). (*Communicated by Clément Laburthe.*)	3206	19th Dec. 1863	William Edward Gedge.
BOXES, TRUNKS, PORTMANTEAUS, LETTER-BOXES, WORK-BOXES, DRESSING-CASES, CANISTERS.			
Improvements in lucifer matches, fusees and other similar lights, and in the boxes or holders for containing the same. (*Communicated by Thomas Jordery.*)	56	7th Jan. 1863	William Squire Bruce.
Manufacture of match boxes - - -	62	7th Jan. 1863	George Dowler.
Manufacture of metallic boxes - - -	237	27th Jan. 1863	William Rollason the younger.
Construction of air-tight boxes, cases, cupboards and similar vessels.	276	29th Jan. 1863	Frederick George Stuber.
Means or apparatus for soldering together parts of vessels formed of tin or tinned plate. (*See* "METALS.")	295	2nd Feb. 1863	Alexander Forbes.
Locks - - - - - (*For Trunks.*)	347	7th Feb. 1863	Claude Parigot. Antoine Grivel.
An improved receptacle for gold, silver or other coins.	640	6th March 1863	Thomas Hancock.
Action of charger or measure for powder flasks, canisters or other vessels.	678	12th March 1863	Edward Henry Lomas.
Casings, covers or wrappers for bottles, jars and other articles.	854	2nd April 1863	Anton Bruno Seithen.
Boxes or cases for the enclosure and preservation of human remains. (*See* "COFFINS.")	909	10th April 1863	Henry Revell Spicer.
Construction of trunks, portmanteaus and boxes -	931	13th April 1863	Michael Myers.
Improvements in the construction of locks applicable to despatch and other boxes, writing and dressing cases or other similar receptacles.	959	16th April 1863	William Oldfield.
Construction of boxes or cases for carrying and packing bottles.	1134	6th May 1863	Thomas Beesley.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
Boxes, &c.—*continued.*			
An improvement in the construction of portable wine cases or bins for domestic use or export, and a pic-nic chest combined.	1168	9th May 1863	Edward Rawson Clark.
An improvement or improvements in match boxes -	1215	14th May 1863	George Dowler.
Manufacture of ornamental metal cylinders - (*For making boxes.*)	1314	25th May 1863	Thomas Spurrier.
Manufacture of cardboard or paper boxes or receptacles.	1356	29th May 1863	François Patureau.
Improvements in making portmanteaus and trunks of various shapes and sizes, light, strong, air tight and water tight, capable of bearing immersion in water without injuring the contents.	1562	22nd June 1863	Edwin Wilks.
Improved means of attaching boxes or receptacles to hold soap, black lead or similar household articles, to the sides of wash-tubs, pails or house boxes.	1675	6th July 1863	Thomas William Couldery.
Improvements in lucifer matches, fusees and other similar lights, and in the boxes or holders for containing the same. (*Communicated by Thomas Jordery.*)	1683	7th July 1863	William Squire Bruce.
An improved packing case to contain bottled beer, wine or any other liquid in bottle.	1780	16th July 1863	Samuel Aylett Cooper.
Fastenings for packing cases - - -	1890	30th July 1863	Richard Hoe. Henry James Cole.
Locks or fastenings - - - - (*For despatch boxes.*)	2013	14th Aug. 1863	Frederick John Jones.
Closing powder canisters and other vessels - - (*Communicated by Joseph Sagnes.*)	2064	22nd Aug. 1863	Richard Archibald Brooman.
Machinery for manufacturing moulded articles of india-rubber. (*Boxes, trunks, &c.*) (*Communicated by John Green.*)	2330	21st Sept. 1863	Hiram Hutchinson.
Certain improvements in "baling boxes" used in packing cotton or other fibrous materials -	2541	17th Oct. 1863	William Routledge. Frederick Francis Ommanney.
Improvements in the manufacture of saddles and harness, and in materials for and in ornamenting the same, which improvements are applicable for parts of carriages, dress and coverings for the head and other articles. (*Portmanteaus.*)	2579	21st Oct. 1863	Thomas Charles Clarkson.
Portable writing cases and despatch boxes - -	2613	23rd Oct. 1863	Mary Anne Boyle.
Fastening and securing envelopes, letters, despatches, parcels, packages and other similar articles.	2704	31st Oct. 1863	John Harcourt Brown.
A new system of fastening for doors, windows, safes, chests and other similar purposes -	2742	5th Nov. 1863	Henry Hancock. William Henry Vickers, junior.
Overland and other portmanteaus - -	2859	14th Nov. 1863	John Southgate.
An improved method or apparatus for affixing labels on bottles, canisters and other like articles - - - - - -	2869	16th Nov. 1863	Andrew Pollock Henry. Richard Threlfall Power.
An apparatus applicable to time, fare, distance and other tables, almanacs, arithmetical calculations, postal and other boxes.	2882	18th Nov. 1863	Thomas Christopher Kimpton.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BOXES, &c.—*continued.*			
An improved apparatus for closing and fastening gates, doors and things of that description. (*Boxes.*)	2934	21st Nov. 1863	Ludovic D'Estie ne de Saint Jean.
Adapting or arranging tapes and other such narrow fabrics and threads for use.	2940	21st Nov. 1863	Marcus Brown Westhead.
Improvements in pencil cases and holders for crayons and other marking, writing or drawing materials, and in boxes for holding leads for pencils, crayons and other articles.	3071	7th Dec. 1863	Michael Turnor.
Receptacles for containing biscuits, fruits and other articles.	3075	7th Dec. 1863	Thomas Bate.
Cases for packing and storing bottles - -	3184	17th Dec. 1863	George Henry Ellis.
Jewel, photograph, instrument and other cases -	3187	17th Dec. 1863	Charles Jeffreys.
Letter boxes - - - - - - (*Communicated by Emmanuel Neriny.*)	3197	18th Dec. 1863	Henri Adrien Bonneville.
BREAD, BISCUITS AND PASTRY; KNEADING-MACHINES; BAKERS' OVENS.			
Machinery for manufacturing bread, biscuits and other like articles - - - - -	45	6th Jan. 1863	Thomas Vickers the elder. Thomas Vickers the younger. Thomas Ashmore.
Apparatus for generating carbonic acid - - (*For panification.*)	732	18th March 1863	Auguste Morel.
Moulding articles of china or other clay or of other plastic materials. (*Paste.*)	1000	22nd April 1863	François Durand.
Improvements in the manufacture of bread and in apparatus used for the same.	1241	18th May 1863	William Watson.
Ovens - - - - - - - (*Communicated by Jacques Blondel.*)	1942	6th Aug. 1863	William Clark.
Hydraulic apparatus - - - - - (*Used in manufacture of vermicelli.*) (*Communicated by Auguste Desgoff and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Improved machinery or apparatus for stirring or mixing various ingredients or materials to a pasty consistence, said machinery being especially adapted to the manufacture of bread and other articles of food. (*Communicated by Charles Constant Simonet de Changy.*)	2350	24th Sept. 1863	Adolphe Ernest Ragon.
Ovens - - - - - - - -	2698	30th Oct. 1863	Henry Clow.
Receptacles for containing biscuits, fruits and other articles.	3075	7th Dec. 1863	Thomas Bate.
An improved kneading-machine - - - (*Communicated by Jean Antoine Kautret.*)	3262	24th Dec. 1863	William Edward Gedge.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BREAKS, SKIDS AND BUFFERS FOR CARRIAGES AND RAILWAYS.			
Certain improvements in the means of retarding or stopping railway and other carriages.	144	16th Jan. 1863	John Kerr.
Apparatus for retarding and stopping railway carriages. (*Communicated by Charles Fray, Vincent Paul Amédée Varenne, Louis Casimir Descouleur and Sabin Joseph Cazier.*)	172	20th Jan. 1863	Michael Henry.
A new or improved coupling and break for transmitting or regulating or arresting motion. (*See* "GOVERNORS.")	263	29th Jan. 1863	Thomas Aldridge Weston.
An improved spring catch or fastening applicable to windows and other useful purposes. (*To railway breaks.*)	318	4th Feb. 1863	William Thomas Weston.
An improved atmospheric brake or break - -	440	18th Feb. 1863	Michel Siégrist.
Breaks for omnibuses and other carriages -	650	9th March 1863	John Haworth.
Improvements in traction engines and in apparatus for indicating the pressure of steam. (*Regulating speed by a break action.*)	669	11th March 1863	Andrew Barclay.
Apparatus or means for lessening the recoil of cannon.	958	16th April 1863	Stephen Moulton.
Improvements in springs to be used for railway buffers, draw hooks, and also for carrying springs of railway carriages and other vehicles -	1102	2nd May 1863	John William Gibson. William Turner.
Stopping and starting railway trains - -	1121	5th May 1863	Frank Applegate.
Railway breaks - - - -	1349	29th May 1863	Alfred Abadie.
Railway brakes - - - -	1641	1st July 1863	Thomas Taylor.
An improved method of breaking the speed of and stopping railway trains or other locomotive wheeled carriage or carriages, at the same time signalling to the driver, or for using the signal and break separately.	1851	24th July 1863	William Lawson Barnes.
Buffing and traction apparatus of railway carriages and waggons.	1889	30th July 1863	George Smith.
Brakes for railway and other carriages - -	1919	4th Aug. 1863	Joseph Abrahams.
Hand trucks - - - - - (*Communicated by Alexander Douglas.*)	2009	14th Aug. 1863	Samuel Russel Wilmot.
Railway breaks actuated by the pressure of the atmosphere.	2015	14th Aug. 1863	Michel Siegrist.
Certain improvements in break blocks for railway and other carriages, and in the means of applying the same.	2117	27th Aug. 1863	John Clark.
An improved wagon break - - -	2193	5th Sept. 1863	Thomas Smith.
Improved arrangements for facilitating the quick detachment of horses or draught animals from carriages or vehicles, and for the application of break power with the view to prevent accidents.	2257	14th Sept. 1863	George Francis Millin.
Apparatus applied to railway carriages and trains in order to obtain greater safety to passengers.	2285	17th Sept. 1863	John Gottlieb Ulrich.
An improved break for railway and other carriages	2376	28th Sept. 1863	Thomas Lowe.
Railway and other breaks - - - (*Communicated by Isidore Alexandre Moineau.*)	2403	1st Oct. 1863	Henri Adrien Bonneville.
Construction of railway carriages - -	2446	6th Oct. 1863	George Dyer.
Railway carriages - - - -	2447	6th Oct. 1863	Alexander Johnston.

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BREAKS, &c.—*continued.*			
Breaks for railway trains and other purposes -	2557	19th Oct. 1863	Louis Eynard.
Breaks applicable to railway and other carriages -	2798	11th Nov. 1863	François Testuz.
Working railway breaks - - - (*Communicated by Donald Bethune.*)	3051	4th Dec. 1863	Richard Archibald Brooman.
Railway carriage and other brakes - -	3083	8th Dec. 1863	Jean Aubert.
Railway engines, carriages and permanent way for steep inclines.	3132	16th Dec. 1863	John Barraclough Fell.
Locomotive engines and trains for railways, tramways and common roads.	3195	18th Dec. 1863	William Bridges Adams.
BREWING, FERMENTING, MANUFACTURING AND TREATING BEER, WINE, &c.; YEAST; TREATING MALT AND HOPS.		- -	
Improvements in the method of and apparatus for preparing materials for the manufacture of paper and similar purposes, part of the invention being also applicable to other operations in which materials are subjected to the action of hot agents. (*Making extract of malt, hops, &c.*)	1	1st Jan. 1863	Robert Hanham Collyer.
An improved injector or apparatus for feeding boilers with water - - - - (*Or pump for breweries.*)	304	3rd Feb. 1863	Joseph Fletcher. Henry Bower.
An improvement in brewing - - -	428	17th Feb. 1863	William Thomas Dibb.
Mashing machinery used in making fermented liquors.	555	27th Feb. 1863	James Fry.
Certain improvements in brewing and in apparatus employed therein.	567	28th Feb. 1863	Joseph Maxfield.
An improved method of applying heat in the manufacture and refining of sugar, and in malting, hop drying, brewing, distilling and vinegar making.	584	2nd March 1863	Charles Garton.
Apparatus for making extracts of hops and for selecting or separating the seeds and pollen from hops.	698	14th March 1863	Richard Moreland, junior.
Improvements in preventing fermentation in alcoholic and other liquids while drawing them from their containing vessels, and in apparatus for the same. (*Communicated by Charles Pierre Laurens, Adolphe Peret and François de Trégomain.*)	839	1st April 1863 - -	William Clark. -
Preservation of perishable liquids during the withdrawal or consumption thereof.	844	1st April 1863	Robert Gavin.
Machinery or apparatus for drying grain, applicable also to the manufacture of malt. (*Communicated by George Henry Fourdrinier.*)	876	7th April 1863	John Henry Johnson.
Heating the contents of mash tuns - -	1063	29th April 1863	Frederick Gretton.
Improvements in obtaining vegetable extracts and in apparatus employed therein. (*Extract of malt and hops.*)	1345	28th May 1863	Thomas Jarvis.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BREWING, &c.—*continued.*			
Treating liquorice root to obtain liquid and solid extracts therefrom. (*For preparation of drinks.*) (*Communicated by Frumence Nicolas Frezon.*)	1402	5th June 1863	Richard Archibald Brooman.
Obtaining certain products from hops - -	1428	9th June 1863	George Hills.
An improved method of mashing - - - (*See* "DISTILLING.")	1448	11th June 1863	Moritz Hatschek.
Treatment and preservation of yeast - - -	1527	18th June 1863	David Barker.
Machinery or apparatus for the manufacture of malt.	1539	19th June 1863	Joseph Watts.
Improvements in decorticating grain and seeds, and in the application of the products obtained by and materials used in decorticating. (*Grain for manufacture of beer.*) (*Communicated by Jules Lemoine and Louis Joseph Maximilien Chollet.*)	1542	19th June 1863	Michael Henry.
Apparatus for aërating liquids - - - (*Manufacture of champagne.*) (*Communicated by Frédéric Jean Greffier and Paul Dyé.*)	1609	26th June 1863	William Clark.
Improvements in apparatus for supplying carbonic acid gas to casks or other vessels containing beer or other fermented liquid. (*Communicated by James Harrison.*)	1677	6th July 1863	Samuel John Cooke.
An improved packing case to contain bottled beer, wine or any other liquid in bottle. (*See* "BOXES.")	1780	16th July 1863	Samuel Aylett Cooper.
Apparatus used for regulating the temperatures during the process of fermentation in the "union cask," "tunning cask" or "cleansing cask."	1916	3rd Aug. 1863	Hamilton Woods.
Machinery for scouring, cleaning and polishing wheat, rice, malt, grain and other seeds.	1997	13th Aug. 1863	John Ellis.
An improved method of fire-proof construction for buildings by the use of arches formed of concrete. (*Malt rooms.*)	1998	13th Aug. 1863	Charles Colton Dennett.
A new centrifugal disc mashing machine - -	2037	17th Aug. 1863	Allen Michael Dearn.
Mashing machinery used in making fermented liquors.	2112	26th Aug. 1863	James Fry.
Improved means for assisting and regulating the process of fermentation.	2247	12th Sept. 1863	James King.
Construction of apparatus for cooling liquids -	2270	16th Sept. 1863	James Dannatt.
Brewing or preparing beverages from malt and hops.	2312	19th Sept. 1863	John Carpenter Pooley.
Mashing apparatus - - - - -	2336	22nd Sept. 1863	Charles Maitland.
An improved machine for pressing or crushing spent hops.	2439	5th Oct. 1863	Robert Pepper.
Machinery, apparatus or means for drying, cleaning and cooling grain and other vegetable products. (*Malt.*)	2602	22nd Oct. 1863	John Weems.
An improved refrigerator for cooling worts for brewing, or other liquids requiring cooling, and for improving brewers' refrigerators now in use.	2646	26th Oct. 1863	Alfred Blake.
Apparatus for mashing malt for brewing or distilling.	2939	21st Nov. 1863	Douglas William Hamper.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BREWING, &c.—*continued.*			
Apparatus used for brewing	3032	2nd Dec. 1863	Richard Lumley Clifton.
Improvements in malt and hop kilns, which improvements are partly applicable to the ventilation and warming of buildings, and to the drying of various substances.	3124	11th Dec. 1863	Alexander Epps.
BRICKS, TILES AND BUILDING-BLOCKS.			
Improvements in the construction and mode of working apparatus to be employed in pressing, moulding, shaping, embossing, crushing, shearing and cutting metallic and other substances. (*Making bricks, tiles, &c.*)	37	5th Jan. 1863	Henry Bessemer.
Machinery for cutting clay in the manufacture of bricks, tiles and similar articles. (*Communicated by Gottfried Sachsenberg.*)	49	6th Jan. 1863	Julius Gustav Dahlke.
Manufacture of artificial stone (*For building.*) (*Communicated by Joseph Sepulchre.*)	157	19th Jan. 1863	Ephraim Sabel.
Ovens or kilns for firing, burning or baking pottery, bricks, tiles and other earthen or ceramic articles.	471	21st Feb. 1863	Charles Malpas.
Improved brick-making machinery	506	24th Feb. 1863	David Banister Chatterton.
Machinery or apparatus for manufacturing bricks, tiles, pipes and mouldings.	647	9th March 1863	James Cowley.
Machinery for making bricks	789	26th March 1863	George Cowdery.
Improvements in furnaces or fire-places and in apparatus to be used in connection therewith. (*For brick kilns.*) (*Communicated by Louis Herbert.*)	796	26th March 1863	John Henry Johnson.
Moulding machines (*Clay.*)	915	11th April 1863	Frederick Versmann.
Improvements in the manufacture of tiles and in apparatus for the same. (*Communicated by Pierre François Boulet.*)	1011	23rd April 1863	William Clark.
Improvements in apparatus for manufacturing beton and artificial stone, pugging clay and other similar purposes, and in the production of artificial stone, and artistic, ornamental and decorative articles, works and surfaces. (*Communicated by François Coignet.*)	1086	29th April 1863	Michael Henry.
Tiles for drainage or sanatory purposes	1177	11th May 1863	Benjamin Hargreaves.
Improvements in the preparation or treatment of peat or turf, and the manufacture thereof into charcoal and other fuel, drain pipes, building and other tiles, and in apparatus used therein.	1255	19th May 1863	John Kelly.
Brick kilns	1276	21st May 1863	Abraham Thomalley.
Bricks suitable for being used for paving stables and other places.	1375	2nd June 1863	George Hallen Cottam.
Improvements in bricks and in apparatus to be used in manufacturing the same, and in brickwork built therewith.	1398	5th June 1863	Samuel St. Barbe Guillaume.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BOTTLES, &c.—*continued.*			
Preservation of perishable liquids during the withdrawal or consumption thereof.	844	1st April 1863	Robert Gavin.
Casings, covers or wrappers for bottles, jars and other articles.	854	2nd April 1863	Anton Bruno Seithen.
Construction of boxes or cases for carrying and packing bottles.	1134	6th May 1863	Thomas Beesley.
An improvement in the construction of portable wine cases or bins for domestic use or export, and a pic-nic chest combined.	1168	9th May 1863	Edward Rawson Clark.
Improvements in stoppers or bungs for closing or stopping bottles, jars and other vessels, and the muzzles of rifles, and for other like purposes. (*Communicated by Ferdinand Krauskopf.*)	1283	22nd May 1863	Charles Maschwitz the younger.
Covers or capsules for bottles, jars and similar vessels.	1294	23rd May 1863	John Alexander Pickering.
Manufacture of ornamental metal cylinders (*Cases for flasks.*)	1314	25th May 1863	Thomas Spurrier.
Apparatus for bottling liquids or for drawing or letting off at the same time liquids from several different casks or vessels.	1317	25th May 1863	Richard Hayward.
A new and useful hollow elastic stopper for bottles, jugs and other similar vessels.	1341	28th May 1863	Charles Francis Baxter.
Improvements in protecting or preserving the silvering or quicking on glass, and in the manufacture of glass vessels for silvering or quicking. (*Perfumery bottles and jars.*) (*Communicated by Joseph Jules Anthoine and François Etienne Hyppolite Brossette.*)	1512	16th June 1863	Richard Archibald Brooman.
Apparatus for aërating liquids (*Communicated by Frédéric Jean Greffier and Paul Dyé.*)	1609	26th June 1863	William Clark.
An improved cork cutting machine (*Communicated by Edward Borie and Alexander Mackie.*)	1619	29th June 1863	George Davies.
Improvements in stoppers and lids or covers for jars, bottles and other vessels, also in closing and fastening other articles.	1625	30th June 1863	Josiah George Jennings. Manuel Leopold Jonas Lavater.
Stoppers for bottles	1679	6th July 1863	Benjamin Bonfield.
Raising the covers or lids of hot-water jugs, teapots, coffee-pots and other vessels.	2216	9th Sept. 1863	Thomas Naden, the younger.
Improvements in apparatus for stopping bottles, jars and other vessels, which improvements are also applicable for stopping the muzzles of fire-arms.	2223	9th Sept. 1863	Nathan Thompson.
An improved bottle and stopper	2393	30th Sept. 1863	John James Chidley.
Improvements in the manufacture of metallic casks, bottles and other similar vessels, and in machinery employed therein.	2604	22nd Oct. 1863	Benjamin Noakes. Frederick John Wood.
Improvements in the manufacture of metallic capsules for bottles and similar vessels, and in the apparatus or means for applying or fixing such capsules thereon.	2623	24th Oct. 1863	William Betts.
An improved instrument for extracting corks from bottles.	2664	28th Oct. 1863	Stephen Procter.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BOTTLES, &c.—*continued.*			
Machinery for cutting corks, bungs, gun wads and other similar articles.	2754	6th Nov. 1863	William Davies. George Cate.
Apparatus for stopping bottles and other vessels -	2784	9th Nov. 1863	Nathan Thompson.
Construction of syphons for taking off liquid sewerage, overflow of rivers and other like purposes. (*Filling bottles.*)	2849	14th Nov. 1863	George Barker.
Improved modes of preventing accidents arising from the sale or use of poisons. (*Attaching labels to bottles.*)	2866	16th Nov. 1863	Gilbert Thonger.
An improved method or apparatus for affixing labels on bottles, canisters and other like articles.	2869	16th Nov. 1863	Andrew Pollock Henry. Richard Threlfall Power.
Cases for packing and storing bottles - -	3184	17th Dec. 1863	George Henry Ellis.
Improved apparatus for racking and decanting liquids, (termed "Laburthe's apparatus"). (*Communicated by Clément Laburthe.*)	3206	19th Dec. 1863	William Edward Gedge.
BOXES, TRUNKS, PORTMANTEAUS, LETTER-BOXES, WORK-BOXES, DRESSING-CASES, CANISTERS.			
Improvements in lucifer matches, fusees and other similar lights, and in the boxes or holders for containing the same. (*Communicated by Thomas Jordery.*)	56	7th Jan. 1863	William Squire Bruce.
Manufacture of match boxes - - -	62	7th Jan. 1863	George Dowler.
Manufacture of metallic boxes - - -	237	27th Jan. 1863	William Rollason the younger.
Construction of air-tight boxes, cases, cupboards and similar vessels.	276	29th Jan. 1863	Frederick George Stuber.
Means or apparatus for soldering together parts of vessels formed of tin or tinned plate. (*See* "METALS.")	295	2nd Feb. 1863	Alexander Forbes.
Locks - - - - - (*For Trunks.*)	347	7th Feb. 1863	Claude Parigot. Antoine Grivel.
An improved receptacle for gold, silver or other coins.	640	6th March 1863	Thomas Hancock.
Action of charger or measure for powder flasks, canisters or other vessels.	678	12th March 1863	Edward Henry Lomas.
Casings, covers or wrappers for bottles, jars and other articles.	854	2nd April 1863	Anton Bruno Seithen.
Boxes or cases for the enclosure and preservation of human remains. (*See* "COFFINS.")	909	10th April 1863	Henry Revell Spicer.
Construction of trunks, portmanteaus and boxes -	931	13th April 1863	Michael Myers.
Improvements in the construction of locks applicable to despatch and other boxes, writing and dressing cases or other similar receptacles.	959	16th April 1863	William Oldfield.
Construction of boxes or cases for carrying and packing bottles.	1134	6th May 1863	Thomas Beesley.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
Boxes, &c.—*continued.*			
An improvement in the construction of portable wine cases or bins for domestic use or export, and a pic-nic chest combined.	1168	9th May 1863	Edward Rawson Clark.
An improvement or improvements in match boxes -	1215	14th May 1863	George Dowler.
Manufacture of ornamental metal cylinders - (*For making boxes.*)	1314	25th May 1863	Thomas Spurrier.
Manufacture of cardboard or paper boxes or receptacles.	1356	29th May 1863	François Patureau.
Improvements in making portmanteaus and trunks of various shapes and sizes, light, strong, air tight and water tight, capable of bearing immersion in water without injuring the contents.	1562	22nd June 1863	Edwin Wilks.
Improved means of attaching boxes or receptacles to hold soap, black lead or similar household articles, to the sides of wash-tubs, pails or house boxes.	1675	6th July 1863	Thomas William Couldery.
Improvements in lucifer matches, fusees and other similar lights, and in the boxes or holders for containing the same. (*Communicated by Thomas Jordery.*)	1683	7th July 1863	William Squire Bruce.
An improved packing case to contain bottled beer, wine or any other liquid in bottle.	1780	16th July 1863	Samuel Aylett Cooper.
Fastenings for packing cases - - -	1890	30th July 1863	Richard Hoe. Henry James Cole.
Locks or fastenings - - - - (*For despatch boxes.*)	2013	14th Aug. 1863	Frederick John Jones.
Closing powder canisters and other vessels - - (*Communicated by Joseph Sagnes.*)	2084	22nd Aug. 1863	Richard Archibald Brooman.
Machinery for manufacturing moulded articles of india-rubber. (*Boxes, trunks, &c.*) (*Communicated by John Green.*)	2330	21st Sept. 1863	Hiram Hutchinson.
Certain improvements in "baling boxes" used in packing cotton or other fibrous materials -	2541	17th Oct. 1863	William Routledge. Frederick Francis Ommanney.
Improvements in the manufacture of saddles and harness, and in materials for and in ornamenting the same, which improvements are applicable for parts of carriages, dress and coverings for the head and other articles. (*Portmanteaus.*)	2579	21st Oct. 1863	Thomas Charles Clarkson.
Portable writing cases and despatch boxes - -	2613	23rd Oct. 1863	Mary Anne Boyle.
Fastening and securing envelopes, letters, despatches, parcels, packages and other similar articles.	2704	31st Oct. 1863	John Harcourt Brown.
A new system of fastening for doors, windows, safes, chests and other similar purposes -	2742	5th Nov. 1863	Henry Hancock. William Henry Vickers, junior.
Overland and other portmanteaus - -	2859	14th Nov. 1863	John Southgate.
An improved method or apparatus for affixing labels on bottles, canisters and other like articles - - - - -	2869	16th Nov. 1863	Andrew Pollock Henry. Richard Threlfall Power.
An apparatus applicable to time, fare, distance and other tables, almanacs, arithmetical calculations, postal and other boxes.	2882	18th Nov. 1863	Thomas Christopher Kimpton.

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BOXES, &c.—*continued.*			
An improved apparatus for closing and fastening gates, doors and things of that description. (*Boxes.*)	2934	21st Nov. 1863	Ludovic D'Estie ne de Saint Jean.
Adapting or arranging tapes and other such narrow fabrics and threads for use.	2940	21st Nov. 1863	Marcus Brown Westhead.
Improvements in pencil cases and holders for crayons and other marking, writing or drawing materials, and in boxes for holding leads for pencils, crayons and other articles.	3071	7th Dec. 1863	Michael Turnor.
Receptacles for containing biscuits, fruits and other articles.	3075	7th Dec. 1863	Thomas Bate.
Cases for packing and storing bottles - -	3184	17th Dec. 1863	George Henry Ellis.
Jewel, photograph, instrument and other cases -	3187	17th Dec. 1863	Charles Jeffreys.
Letter boxes - - - - - - (*Communicated by Emmanuel Nerisy.*)	3197	18th Dec. 1863	Henri Adrien Bonneville.
BREAD, BISCUITS AND PASTRY; KNEADING-MACHINES; BAKERS' OVENS.			
Machinery for manufacturing bread, biscuits and other like articles - - - - -	45	6th Jan. 1863	Thomas Vickers the elder. Thomas Vickers the younger. Thomas Ashmore.
Apparatus for generating carbonic acid - - (*For panification.*)	732	18th March 1863	Auguste Morel.
Moulding articles of china or other clay or of other plastic materials. (*Paste.*)	1000	22nd April 1863	François Durand.
Improvements in the manufacture of bread and in apparatus used for the same.	1241	18th May 1863	William Watson.
Ovens - - - - - - - (*Communicated by Jacques Blondel.*)	1942	6th Aug. 1863	William Clark.
Hydraulic apparatus - - - - - (*Used in manufacture of vermicelli.*) (*Communicated by Auguste Desgoff and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Improved machinery or apparatus for stirring or mixing various ingredients or materials to a pasty consistence, said machinery being especially adapted to the manufacture of bread and other articles of food. (*Communicated by Charles Constant Simonet de Changy.*)	2350	24th Sept. 1863	Adolphe Ernest Ragon.
Ovens - - - - - - -	2693	30th Oct. 1863	Henry Clow.
Receptacles for containing biscuits, fruits and other articles.	3075	7th Dec. 1863	Thomas Bate.
An improved kneading-machine - - - (*Communicated by Jean Antoine Kautret.*)	3282	24th Dec. 1863	William Edward Gedge.

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BREAKS, SKIDS AND BUFFERS FOR CARRIAGES AND RAILWAYS.			
Certain improvements in the means of retarding or stopping railway and other carriages.	144	16th Jan. 1863	John Kerr.
Apparatus for retarding and stopping railway carriages. (*Communicated by Charles Fray, Vincent Paul Amédée Varenne, Louis Casimir Descouleur and Sabin Joseph Cazier.*)	172	20th Jan. 1863	Michael Henry.
A new or improved coupling and break for transmitting or regulating or arresting motion. (*See* "GOVERNORS.")	263	29th Jan. 1863	Thomas Aldridge Weston.
An improved spring catch or fastening applicable to windows and other useful purposes. (*To railway breaks.*)	318	4th Feb. 1863	William Thomas Weston.
An improved atmospheric brake or break - -	440	18th Feb. 1863	Michel Siégrist.
Breaks for omnibuses and other carriages -	650	9th March 1863	John Haworth.
Improvements in traction engines and in apparatus for indicating the pressure of steam. (*Regulating speed by a break action.*)	669	11th March 1863	Andrew Barclay.
Apparatus or means for lessening the recoil of cannon.	958	16th April 1863	Stephen Moulton.
Improvements in springs to be used for railway buffers, draw hooks, and also for carrying springs of railway carriages and other vehicles -	1102	2nd May 1863	John William Gibson. William Turner.
Stopping and starting railway trains - -	1121	5th May 1863	Frank Applegate.
Railway breaks - - - -	1349	29th May 1863	Alfred Abadie.
Railway brakes - - - -	1641	1st July 1863	Thomas Taylor.
An improved method of breaking the speed of and stopping railway trains or other locomotive wheeled carriage or carriages, at the same time signalling to the driver, or for using the signal and break separately.	1851	24th July 1863	William Lawson Barnes.
Buffing and traction apparatus of railway carriages and waggons.	1889	30th July 1863	George Smith.
Brakes for railway and other carriages - -	1919	4th Aug. 1863	Joseph Abrahams.
Hand trucks - - - - - (*Communicated by Alexander Douglas.*)	2009	14th Aug. 1863	Samuel Russel Wilmot.
Railway breaks actuated by the pressure of the atmosphere.	2015	14th Aug. 1863	Michel Siegrist.
Certain improvements in break blocks for railway and other carriages, and in the means of applying the same.	2117	27th Aug. 1863	John Clark.
An improved wagon break - - -	2193	5th Sept. 1863	Thomas Smith.
Improved arrangements for facilitating the quick detachment of horses or draught animals from carriages or vehicles, and for the application of break power with the view to prevent accidents.	2257	14th Sept. 1863	George Francis Millin.
Apparatus applied to railway carriages and trains in order to obtain greater safety to passengers.	2285	17th Sept. 1863	John Gottlieb Ulrich.
An improved break for railway and other carriages	2376	28th Sept. 1863	Thomas Lowe.
Railway and other breaks - - - (*Communicated by Isidore Alexandre Moineau.*)	2403	1st Oct. 1863	Henri Adrien Bonneville.
Construction of railway carriages - -	2446	6th Oct. 1863	George Dyer.
Railway carriages - - - -	2447	6th Oct. 1863	Alexander Johnston.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BREAKS, &c.—*continued.*			
Breaks for railway trains and other purposes -	2557	19th Oct. 1863	Louis Eynard.
Breaks applicable to railway and other carriages -	2798	11th Nov. 1863	François Testuz.
Working railway breaks - - - (*Communicated by Donald Bethune.*)	3051	4th Dec. 1863	Richard Archibald Brooman.
Railway carriage and other brakes - -	3083	8th Dec. 1863	Jean Aubert.
Railway engines, carriages and permanent way for steep inclines.	3182	16th Dec. 1863	John Barraclough Fell.
Locomotive engines and trains for railways, tramways and common roads.	3195	18th Dec. 1863	William Bridges Adams.
BREWING, FERMENTING, MANUFACTURING AND TREATING BEER, WINE, &c.; YEAST; TREATING MALT AND HOPS.		- -	
Improvements in the method of and apparatus for preparing materials for the manufacture of paper and similar purposes, part of the invention being also applicable to other operations in which materials are subjected to the action of hot agents. (*Making extract of malt, hops, &c.*)	1	1st Jan. 1863	Robert Hanham Collyer.
An improved injector or apparatus for feeding boilers with water - - - - - (*Or pump for breweries.*)	304	3rd Feb. 1863	Joseph Fletcher. Henry Bower.
An improvement in brewing - - -	428	17th Feb. 1863	William Thomas Dibb.
Mashing machinery used in making fermented liquors.	555	27th Feb. 1863	James Fry.
Certain improvements in brewing and in apparatus employed therein.	567	28th Feb. 1863	Joseph Maxfield.
An improved method of applying heat in the manufacture and refining of sugar, and in malting, hop drying, brewing, distilling and vinegar making.	584	2nd March 1863	Charles Garton.
Apparatus for making extracts of hops and for selecting or separating the seeds and pollen from hops.	698	14th March 1863	Richard Moreland, junior.
Improvements in preventing fermentation in alcoholic and other liquids while drawing them from their containing vessels, and in apparatus for the same. (*Communicated by Charles Pierre Laurens, Adolphe Peret and François de Trégomain.*)	889	1st April 1863	William Clark.
Preservation of perishable liquids during the withdrawal or consumption thereof.	844	1st April 1863	Robert Gavin.
Machinery or apparatus for drying grain, applicable also to the manufacture of malt. (*Communicated by George Henry Fourdrinier.*)	876	7th April 1863	John Henry Johnson.
Heating the contents of mash tuns - -	1063	29th April 1863	Frederick Gretton.
Improvements in obtaining vegetable extracts and in apparatus employed therein. (*Extract of malt and hops.*)	1345	28th May 1863	Thomas Jarvis.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BREWING, &c.—*continued.*			
Treating liquorice root to obtain liquid and solid extracts therefrom. (*For preparation of drinks.*) (*Communicated by Frumence Nicolas Frezon.*)	1402	5th June 1863	Richard Archibald Brooman.
Obtaining certain products from hops - -	1428	9th June 1863	George Hills.
An improved method of mashing - - - (*See* "DISTILLING.")	1448	11th June 1863	Moritz Hatschek.
Treatment and preservation of yeast - - -	1527	18th June 1863	David Barker.
Machinery or apparatus for the manufacture of malt.	1539	19th June 1863	Joseph Watts.
Improvements in decorticating grain and seeds, and in the application of the products obtained by and materials used in decorticating. (*Grain for manufacture of beer.*) (*Communicated by Jules Lemoine and Louis Joseph Maximilien Chollet.*)	1542	19th June 1863	Michael Henry.
Apparatus for aërating liquids - - - (*Manufacture of champagne.*) (*Communicated by Frédéric Jean Greffier and Paul Dyé.*)	1609	26th June 1863	William Clark.
Improvements in apparatus for supplying carbonic acid gas to casks or other vessels containing beer or other fermented liquid. (*Communicated by James Harrison.*)	1677	6th July 1863	Samuel John Cooke.
An improved packing case to contain bottled beer, wine or any other liquid in bottle. (*See* "BOXES.")	1780	16th July 1863	Samuel Aylett Cooper.
Apparatus used for regulating the temperatures during the process of fermentation in the "union cask," "tunning cask" or "cleansing cask."	1916	3rd Aug. 1863	Hamilton Woods.
Machinery for scouring, cleaning and polishing wheat, rice, malt, grain and other seeds.	1997	13th Aug. 1863	John Ellis.
An improved method of fire-proof construction for buildings by the use of arches formed of concrete. (*Malt rooms.*)	1998	13th Aug. 1863	Charles Colton Dennett.
A new centrifugal disc mashing machine - -	2037	17th Aug. 1863	Allen Michael Dearn.
Mashing machinery used in making fermented liquors.	2112	26th Aug. 1863	James Fry.
Improved means for assisting and regulating the process of fermentation.	2247	12th Sept. 1863	James King.
Construction of apparatus for cooling liquids -	2270	16th Sept. 1863	James Dannatt.
Brewing or preparing beverages from malt and hops.	2312	19th Sept. 1863	John Carpenter Pooley.
Mashing apparatus - - - - -	2336	22nd Sept. 1863	Charles Maitland.
An improved machine for pressing or crushing spent hops.	2439	5th Oct. 1863	Robert Pepper.
Machinery, apparatus or means for drying, cleaning and cooling grain and other vegetable products. (*Malt.*)	2602	22nd Oct. 1863	John Weems.
An improved refrigerator for cooling worts for brewing, or other liquids requiring cooling, and for improving brewers' refrigerators now in use.	2646	26th Oct. 1863	Alfred Blake.
Apparatus for mashing malt for brewing or distilling.	2939	21st Nov. 1863	Douglas William Hamper.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BREWING, &c.—*continued.*			
Apparatus used for brewing	3032	2nd Dec. 1863	Richard Lumley Clifton.
Improvements in malt and hop kilns, which improvements are partly applicable to the ventilation and warming of buildings, and to the drying of various substances.	3124	11th Dec. 1863	Alexander Epps.
BRICKS, TILES AND BUILDING-BLOCKS.			
Improvements in the construction and mode of working apparatus to be employed in pressing, moulding, shaping, embossing, crushing, shearing and cutting metallic and other substances. (*Making bricks, tiles, &c.*)	37	5th Jan. 1863	Henry Bessemer.
Machinery for cutting clay in the manufacture of bricks, tiles and similar articles. (*Communicated by Gottfried Sachsenberg.*)	49	6th Jan. 1863	Julius Gustav Dahlke.
Manufacture of artificial stone (*For building.*) (*Communicated by Joseph Sepulchre.*)	157	19th Jan. 1863	Ephraim Sabel.
Ovens or kilns for firing, burning or baking pottery, bricks, tiles and other earthen or ceramic articles.	471	21st Feb. 1863	Charles Malpas.
Improved brick-making machinery	506	24th Feb. 1863	David Banister Chatterton.
Machinery or apparatus for manufacturing bricks, tiles, pipes and mouldings.	647	9th March 1863	James Cowley.
Machinery for making bricks	789	26th March 1863	George Cowdery.
Improvements in furnaces or fire-places and in apparatus to be used in connection therewith. (*For brick kilns.*) (*Communicated by Louis Herbert.*)	796	26th March 1863	John Henry Johnson.
Moulding machines (*Clay.*)	915	11th April 1863	Frederick Versmann.
Improvements in the manufacture of tiles and in apparatus for the same. (*Communicated by Pierre François Boulet.*)	1011	23rd April 1863	William Clark.
Improvements in apparatus for manufacturing beton and artificial stone, pugging clay and other similar purposes, and in the production of artificial stone, and artistic, ornamental and decorative articles, works and surfaces. (*Communicated by François Coignet.*)	1086	29th April 1863	Michael Henry.
Tiles for drainage or sanatory purposes	1177	11th May 1863	Benjamin Hargreaves.
Improvements in the preparation or treatment of peat or turf, and the manufacture thereof into charcoal and other fuel, drain pipes, building and other tiles, and in apparatus used therein.	1255	19th May 1863	John Kelly.
Brick kilns	1276	21st May 1863	Abraham Thomalley.
Bricks suitable for being used for paving stables and other places.	1375	2nd June 1863	George Hallen Cottam.
Improvements in bricks and in apparatus to be used in manufacturing the same, and in brickwork built therewith.	1398	5th June 1863	Samuel St. Barbe Guillaume.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BRICKS, &c.—*continued.*			
Manufacture of bricks, quarries, slabs, tiles, earthenware pipes and other earthenware or ceramic articles.	1492	15th June 1863	John Forrester.
Improved machinery for the manufacturing tiles -	1529	18th June 1863	Ephraim Ivett.
Certain compositions for protecting metals and metallic articles from oxidation, and for coating slate, bricks, pottery and ceramic wares. (*Communicated by Camille Baroness de Lavenant.*)	1646	2nd July 1863	Richard Archibald Brooman.
Brick machines - - - - (*Communicated by Isaac Gregg.*)	1692	8th July 1863	George Haseltine.
Improved machinery for compressing bricks, tiles and other plastic materials.	1766	14th July 1863	James Slater.
An improved fire-proof cement which may be employed for covering walls, ceilings and floors, and is also applicable in the manufacture of fire bricks, crucibles, retorts, melting pots, and for other purposes where fire-resisting properties are required.	1908	1st Aug. 1863	Richard Edwin Bibby.
Hydraulic apparatus - - - (*Presses used in brick making.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Certain improvements in machinery or apparatus for preparing and drying clay, and also in machinery to be employed in the manufacture of bricks and tiles.	2166	2nd Sept. 1863	Joseph Lewis.
An improved method of making and inlaying encaustic tiles or other plastic articles and substances - - - -	2176	3rd Sept. 1863	William Boulton. Joseph Worthington.
New tiles - - - -	2296	18th Sept. 1863	Alfred Noirot.
Machinery or apparatus for making bricks, tiles or slabs, and other such articles - -	2318	19th Sept. 1863	James Farmer. Charles Hadfield.
Machinery or apparatus for making bricks, tiles, pipes and other similar articles.	2335	22nd Sept. 1863	Peter Effertz.
Improvements in brick and tile making machinery, applicable also to machinery for manufacturing other articles from plastic materials - -	2337	22nd Sept. 1863	John Bond. James Bond.
A new mode of manufacturing bricks and tiles -	2402	1st Oct. 1863	Thomas Bell.
Construction of arches and other like structures -	2428	3rd Oct. 1863	Ignatius Bonomi.
Buildings used for drying bricks, tiles and other articles.	2526	15th Oct. 1863	Henry Clayton.
Lamps and stoves for the application of blast heat to horticultural, agricultural and other specified purposes. (*To put a glaze on bricks.*)	2535	16th Oct. 1863	Frederick George Stuber.
Improvements in the induration of stone, cement, stucco, brick or other analogous materials, also in the manufacture of artificial stone.	2550	17th Oct. 1863	Fedor De Wyldé.
Machinery or apparatus for making bricks and tiles, applicable also for washing and drying clay - - - - -	2668	28th Oct. 1863	James Cavanah. John Cavanah.
Manufacture of bricks, drain pipes, traps, sewage tanks and water closet pans and valves, and the machinery and apparatus necessary for the same.	2708	31st Oct. 1863	Edward Jones.
Machinery for making bricks and other like articles	2932	21st Nov. 1863	William Williams

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BRICKS, &c.—*continued.*			
Machinery for making bricks - - -	2944	23rd Nov. 1863	Peter Bawden.
Improvements in machinery for amalgamating or intermixing dry semifluid or aqueous materials, and for agitating solids with liquids for combining, dissolving or washing the same. (*Tempering clay.*)	2947	23rd Nov. 1863	Thomas Carr.
Preparation of clay for the manufacture of bricks, tiles and other articles which may be made of such material - - - - -	3145	12th Dec. 1863	John Platt. William Richardson.
Machinery for manufacturing bricks - -	3199	18th Dec. 1863	Henry Clayton.
Improvements in the arrangement of furnaces, flues and kilns for drying and burning bricks, tiles and other articles, and in the application of the heat from the kilns to boilers for generating steam.	3266	24th Dec. 1863	James Duckett.
BRIDGES, VIADUCTS AND AQUEDUCTS.			
An improved mode of applying and fastening metal sheathing to the bottoms of iron ships or vessels, and to iron for other uses - - (*To iron for caissons.*)	602	4th March 1863	Charles Mark Palmer. John M^{c}Intyre.
Sheathing iron ships, caissons and other like structures.	665	11th March 1863	William Robinson Mulley.
Machinery for rolling armour plates, bridge plates, boat plates, and other plates and bars of iron -	681	13th March 1863	John Harris. Joseph Butler. John Henry Fraser.
Improvements in the construction of ships or vessels, part of which improvements are also applicable for constructing buildings, and for various other purposes in which rolled iron is employed. (*For bridges.*)	851	2nd April 1863	William Jones.
Turn-tables, turn-bridges and slips - - -	984	20th April 1863	Ebenezer William Hughes.
Improved apparatus for fixing drills, which invention is also applicable for fixing apparatus for raising, supporting and suspending weights and for other analogous purposes. (*Plates for bridges.*)	1029	25th April 1863	Leopold De Breánski.
Improvements in apparatus for manufacturing beton and artificial stone, pugging clay and other similar purposes, and in the production of artificial stone, and artistic, ornamental and decorative articles, works and surfaces. (*For aqueducts.*) (*Communicated by François Coignet.*)	1086	29th April 1863	Michael Henry.
Portable apparatus or instruments for rivetting, caulking, chipping and otherwise operating upon and treating metals and other substances. (*Building bridges.*)	1095	1st May 1863	John McFarlane Gray.
Construction of wrought iron cylinders for piers or piles to bridges, viaducts, or for other foundations or structures where the sinking of cylinders is required.	1332	27th May 1863	Howard John Kennard.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BRIDGES, &c.—*continued.*			
Using Apo-elastikon-hyphrasma as a new and improved cloth for floors, roofs, walls, tanks and other linings, being impervious to damp and of great strength and durability. (*For making joints between girders on bridges.*)	1603	25th June 1863	William Kirrage.
Improvements in piles for foundations and in piers for bridges and other buildings or structures.	1723	10th July 1863	Charles De Bergue.
A new application of rolled metal plates to the formation of railways, bridges, tramways and other structures.	1937	6th Aug. 1863	Joseph Emerson Dowson.
An improved method of fire-proof construction for buildings by the use of arches formed of concrete.	1998	13th Aug. 1863	Charles Colton Dennett.
Construction of military bridges, piers, landing-stages and escalading apparatus.	2096	24th Aug. 1863	Frederick Rice Stack.
Hydraulic apparatus - - - - (*Cranes used in bridge building.*) (*Communicated by Auguste Desgoffe and Achille Ollivier*).	2159	1st Sept. 1863	William Clark.
Improvements in the construction of floating docks and pontoons, and the means of cleaning, painting or repairing them.	2196	5th Sept. 1863	George Banks Rennie.
An improved fire-proof floor or roof for buildings, bridges and other structures.	2929	21st Nov. 1863	Thomas Turner.
Constructing the floors of bridges and other buildings.	2935	21st Nov. 1863	Edward Finch.
Construction of railway and other bridges - -	308	8th Dec. 1863	Robert Thornton.
BRUSHES AND BROOMS.			
Brushes, instruments or apparatus employed for painting the centres and bulls-eyes of military or other targets.	122	15th May 1863	Douglas Monro Fyfe.
Improvements in machinery for dragging bristles, applicable also to drawing or sorting fibres and hair into different lengths.	1813	20th July 1863	Augustus Smith.
Application of india-rubber and gutta-percha to the manufacture of brushes and mats. (*Communicated by Anthony Pollak.*)	1963	8th Aug. 1863	Astley Paston Price.
Improvements in parallel turning and in machinery for that purpose. (*Broom and mop handles.*)	2475	9th Oct. 1863	Joseph Elsom.
Improved apparatus for cleaning out the tubes of steam-boilers, which apparatus is also applicable for cleaning out other tubes.	2500	12th Oct. 1863	Thomas Fox.
A new apparatus for rubbing off or removing the dust or dirt from boots or shoes.	2529	15th Oct. 1863	Baldwin Fulford Weatherdon.
Improvements in smut machines and in machines for cleansing and peeling grain and seeds.	2534	16th Oct. 1863	François Antoine Edmond Guironnet de Massas.
Improvements in the manufactures of brushes used in machines employed for preparing and combing wool, cotton, silk and other fibrous substances.	2647	26th Oct. 1863	Edward Clifton. Benjamin Greenwood.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BUILDING, PLASTERING, FLOORING AND ROOFING; WALLS, CEILINGS AND CORNICES; TENTS; LADDERS.			
Improved plates or slabs for preserving apartments from the effects of damp, and which are also applicable in the composition of plinths and foundations for walls. (*Communicated by François Jaffary.*)	89	10th Jan. 1863	Louis Henry Emmanuel Lepreux.
Fabrics for covering floors, walls, roofs and other surfaces or objects, which fabrics are also partly applicable to the manufacture of waterproof articles.	232	27th Jan. 1863	Henry Henson Henson.
Improved preparations or compositions for coating and colouring the walls, ceilings and other parts of buildings.	293	2nd Feb. 1863	Edwin Hope Massey.
An improvement in iron and other metal bond for use in building.	317	4th Feb. 1863	Zachariah Major Parkes.
Improvements in pavements and floors, which improvements are applicable also to stairs and steps.	374	11th Feb. 1863	Robert Saunders.
Improvements in horticultural buildings and other glazed structures, part of which improvements is also applicable to ventilating other buildings.	624	5th March 1863	John Miller.
Construction or laying of wooden floors - - (*Communicated by Edouard Hamelle.*)	657	9th March 1863	William Edward Newton.
An improved composition for the coating and preservation of canvas and other materials to make them waterproof and non-inflammable. (*For roofing sheds.*)	735	19th March 1863	Ellis Lever.
Improvements in the construction of ships or vessels, part of which improvements are also applicable for constructing buildings and for various other purposes in which rolled iron is employed.	851	2nd April 1863	William Jones.
The application of glass for ceilings and the like overhead parts of houses and other structures.	894	9th April 1863	Thomas Theodore Heath.
Hardening and colouring gypseous limestone and sand and calcareous stones. (*For decorations of walls.*) (*Communicated by Pascal Nicolas Balthazar Fioravanti.*)	940	14th April 1863	Richard Archibald Brooman.
Preparation of stone, plaster, compo, iron, wood and such like substances, so as to preserve them from decay. (*For walls, floors and ceilings.*)	1015	24th April 1863	John Benjamin Daines.
Improvements in apparatus for manufacturing beton and artificial stone, pugging clay and other similar purposes, and in the production of artificial stone, and artistic, ornamental and decorative articles, works and surfaces. (*For arches, &c.*) (*Communicated by François Coignet.*)	1086	29th April 1863	Michael Henry.
Manufacture of sheets, slabs and other articles when fibrous materials are employed. (*For panelling.*)	1158	8th May 1863	Charles Frederick Bielefeld.
An improved apparatus for saving from destruction by fire persons and property in houses, buildings and ships, and also for ventilating ships. (*Communicated by James Partridge.*)	1256	19th May 1863	Abraham Parker.
Construction of orchestras - - -	1304	23rd May 1863	Frederick Kingsbury.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BUILDING, &c.—*continued.*			
Improvements in the construction of the frames, sashes, shutters, blinds and ventilators for windows or other openings, part of which improvements are also applicable to other constructive purposes. (*Iron houses.*)	1315	25th May 1863	John Hilliar.
Mode of producing ornamental surfaces applicable to the general purposes of decoration. (*Ornamenting walls and floors.*)	1335	28th May 1863	Francis Robert Piltz.
Improvements in bricks and in apparatus to be used in manufacturing the same, and in brickwork built therewith.	1398	5th June 1863	Samuel St. Barbe Guillaume.
An improved means for the protection and preservation of lead surfaces exposed to the action of water, and for the protection of such surfaces from decomposition by atmospheric action. (*Roofs.*) (*Communicated by Professor Dr. Henry Schwarz.*)	1519	17th June 1863	Fédor de Wyldé.
Plastering, colouring and decoration of walls and ceilings.	1521	17th June 1863	Thomas Purdie.
A new material or compound applicable to the manufacture of pipes or tubes, to caulking or covering ships' bottoms, and to other useful purposes. (*For roofing and cornices.*)	1550	20th June 1863	Charles Peterson.
Using Apo-elastikon hyphrasma as a new and improved cloth for floors, roofs, walls, tanks and other linings, being impervious to damp and of great strength and durability.	1603	25th June 1863	William Kirrage.
A new mode of roofing houses, buildings and other structures. (*Communicated by Messrs. Gaduel Boisserane and Garnier.*)	1697	8th July 1863	Peter Armand Le Comte de Fontaine Moreau.
Improvements in piles for foundations, and in piers for bridges and other buildings or structures.	1723	10th July 1863	Charles De Bergue.
Construction and arrangement of dwelling houses in combination with the means employed for ventilating the same.	1740	13th July 1863	James Mortimer.
Improvements in the manufacture of pillars, posts, columns, mouldings and buildings when corrugated metal is employed, and in machinery used in corrugating, moulding and shaping metal for such purposes.	1792	16th July 1863	Edwin Maw.
Manufacture of various articles with surfaces in imitation of different kinds of marbles or similar ornamental materials - - - - - (*Wall linings.*)	1863	27th July 1863	Frederick Ford. Lewis Ford.
An improved fire-proof cement which may be employed for covering walls, ceilings and floors, and is also applicable in the manufacture of fire bricks, crucibles, retorts, melting pots, and for other purposes where fire resisting properties are required.	1908	1st Aug. 1863	Richard Edwin Bibby.
A new application of rolled metal plates to the formation of railways, bridges, tramways and other structures. (*Floors, &c.*)	1937	6th Aug. 1863	Joseph Emerson Dowson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BUILDING, &c.—*continued.*			
Machines for the preparation of moulds for casting (*Balcony panels, &c.*)	1990	12th Aug. 1863	Richard Canham.
An improved method of fire-proof construction for buildings by the use of arches formed of concrete.	1998	13th Aug. 1863	Charles Colton Dennett.
Hydraulic apparatus - - - - (*Cranes ued in removal, &c. of buildings.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
An improvement in T fastenings - -	2299	18th Sept. 1863	Herbert William Hart.
An improved method of constructing magazines for the safer and more economical storing of volatile oils in localities where the ground and labour are expensive. (*Communicated by Moritz Pinner.*)	2308	19th Sept. 1863	James Fraser.
An improved plastic composition applicable to the coating of metallic and other surfaces. (*For foundations for buildings, floors, &c.*)	2371	26th Sept. 1863	James Spence.
Construction of arches and other like structures -	2428	3rd Oct. 1863	Ignatius Bonomi.
Improvements in parallel turning and in machinery for that purpose. (*Tent poles.*)	2475	9th Oct. 1863	Joseph Elsom.
Improvements in sheathing for navigable vessels of iron or wood, which sheathing is also applicable to the covering of roofs, walls and other purposes.	2478	9th Oct. 1863	John M'Innes.
Buildings used for drying bricks, tiles, and other articles.	2526	15th Oct. 1863	Henry Clayton.
Improved apparatus for boring and cleaving stone (*For building.*)	2531	16th Oct. 1863	James Polglase. Jonathan Cox.
Ornamenting glass and sheet gelatine - - (*For panel work.*)	2670	28th Oct. 1863	William Nall.
Improvements in the construction of iron and other ships, vessels and batteries of war, and of cupolas and armour plates applicable thereto, parts of which improvements are also applicable to other useful purposes. (*Ladders of galvanised iron wire.*)	2690	30th Oct. 1863	Barnabas Russ.
An improved and economical construction of cottages, applicable also to various other descriptions of buildings.	2867	16th Nov. 1863	Edmund Wallace Elmslie.
Connecting scaling, fire and other like ladders -	2923	20th Nov. 1863	George Fawcus.
An improved fire-proof floor or roof for buildings, bridges and other structures.	2929	21st Nov. 1863	Thomas Turner.
Constructing the floors of bridges and other buildings.	2935	21st Nov. 1863	Edward Finch.
Improvements in testing or measuring the strength and other properties of various materials and structures, and in apparatus therefor. (*Brickwork.*)	2970	26th Nov. 1863	David Kirkaldy.
An improved composition for covering steam-boilers and pipes and other surfaces. (*Roofing.*)	3082	8th Dec. 1863	Henry Benson James.
Construction and building of portable cottages or houses and other buildings.	3196	18th Dec. 1863	Robert Saunders.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BUILDING, &c.—*continued.*			
Mode of and apparatus for constructing houses and other structures of plastic materials. (*Communicated by Alphonse Pallu.*)	3228	21st Dec. 1863	Michael Henry.
For ventilating buildings, *see* "VENTILATION." For warming buildings, *see* "HEATING." For lighting buildings, *see* "LAMPS."			
BUOYS, SWIMMING BELTS, DRESSES AND APPARATUS; BUOYING AND DIVING; PRESERVING LIFE AND PROPERTY IN CASE OF SHIPWRECK; MARINE LIGHTS.			
Means or apparatus for saving or preserving money, papers or other valuable property at sea in case of shipwreck. (*Communicated by Charles Blacktin.*)	35	5th Jan. 1863	Henry Blacktin.
Improved apparatus for preserving valuable property documents and letters in cases of shipwreck. (*Floating safes.*)	148	16th Jan. 1863	Edward Loysel.
Floating or life preserving coats or garments. (*Swimming dress.*) (*Communicated by Jean Louis Vergniais.*)	431	17th Feb. 1863	Estève Deville.
An improved life preserving garment.	510	24th Feb. 1863	Augustus Junger.
Mooring buoys.	590	3rd March 1863	George Fosbery Lyster.
Improvements in swimming baths and in apparatus for swimming, part of which apparatus is applicable to sailing or moving vessels in a circle.	715	17th March 1863	John Cox.
A new and useful or improved submarine lantern to be used in explorations beneath the surface of the ocean or any other large body of water.	1065	28th April 1863	George Washington Fuller.
Apparatus for preserving property in case of shipwreck. (*Communicated by George Mitchell.*)	1067	28th April 1863	John Henry Johnson.
Improved apparatus for laying down, protecting and controlling submarine cables for telegraphing from vessels moored off a coast to the shore. (*Buoying.*)	1069	28th April 1863	Thomas Moore.
Laying submarine telegraph cables. (*Communicated by Adolphe Pelegrin and Auguste Garbeiron.*)	1199	13th May 1863	Richard Archibald Brooman.
Manufacture of certain articles to be used for preserving life at sea and other purposes.	1263	20th May 1863	Walter John Colin Lang.
Safety garments. (*Against drowning.*) (*Communicated by André Selingue.*)	1303	23rd May 1863	Richard Archibald Brooman.
Apparatus for the preservation of life from drowning.	1598	25th June 1863	Callistus Augustus Count de Goddes de Liancourt.
Diving apparatus.	2118	27th Aug. 1863	James Ward.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BUOYS, &c.—*continued.*			
Improved means of and apparatus for employing vapours, gases and the heat derived from combustible matters. (*Supplying air to diving bells.*)	2241	11th Sept. 1863	Louis Meyer.
Life belts and swimming belts. (*Communicated by Torrilhon Verdier and Company.*)	2286	17th Sept. 1863	John Henry Johnson.
Apparatus for sustaining and raising ships or vessels, applicable also as life buoys.	2688	30th Oct. 1863	George Rosselet.
The manufacture and application of gases to aid in the lighting of railway carriages separately or conjointly, omnibuses or other carriages, ships, steam-boats or other such like vessels, light-houses, or other places where portable gas apparatus may be required.	2966	25th Nov. 1863	Edward Bevan.
Improvements in raising sunken vessels and other submerged dead weights, and in preventing the sinking of vessels in case of accident at sea, and in the apparatus employed therein (*Communicated by James M^c^Leod.*)	3142	12th Dec. 1863	John Henry Johnson.
For life-boats, *see* "SHIP-BUILDING."			
BUTTONS, BUCKLES, HOOKS AND EYES AND OTHER DRESS FASTENINGS.			
An improvement or improvements in the manufacture of buckles.	14	2nd Jan. 1863	Charles Eyland.
Buttons - - - - - - -	60	7th Jan. 1863	George Augustus Huddart.
Manufacture of buttons - - -	150	17th Jan. 1863	John Edwards.
Manufacture of buttons - - - - (*Communicated by Pierre Labat.*)	156	17th Jan. 1863	William Edward Newton.
Buckle and hook fastenings - - - -	329	5th Feb. 1863	John Paterson.
Fastenings for studs, sleeve fasteners, solitaires, bracelets, brooches and other uses.	434	17th Feb. 1863	James Wakeman Lane.
Manufacture of buttons which may be instantaneously attached without sewing.	438	18th Feb. 1863	Edward Strawson.
Improvements in buttons and other similar fastenings, and in the modes of attaching or securing the same.	461	20th Feb. 1863	William Marsden.
Manufacture of buttons - - - -	526	25th Feb. 1863	John Edwards.
Improvements in the manufacture of buttons and in apparatus for the same. (*Communicated by Achille Auguste Feldtrappe and René Dufoy.*)	544	26th Feb. 1863	William Clark.
Studs or fastenings adapted to holding together parts of shirt fronts, wristbands, collars, gloves and other articles of wearing-apparel.	712	17th March 1863	William Henry Atkinson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
BUTTONS, &c.—*continued.*			
A new and improved mode of inlaying gold and other metals in glass, and in a composition suitable for the manufacture of jewellery and other ornaments, buttons and other similar articles.	720	18th March 1863	William Charles Wild. James Henry Randel.
Manufacture of buttons - - - - -	1026	24th April 1863	James Hinks. James Newman.
Certain improvements in the mode of finishing clasps and other such like metallic connectors, and which said mode of finish is also applicable for other purposes.	1142	7th May 1863	Alfred Stanley.
Improvements in buttons and in fastening buttons to garments.	1224	15th May 1863	Alexander Macmillan.
An improved fastening - - - - -	1606	25th June 1863	Alfred Watson.
Clasps or fastenings for securing brooches, solitaires and other dress ornaments - - -	1631	30th June 1863	Samuel Cole.
Pins or hooks for suspending fabrics, dresses or parts of dresses, curtains and other articles of upholstery or apparel.	1716	9th July 1863	William Tent.
A new fastener or holder for flowers or other decorations to coats and articles of dress.	1735	11th July 1863	Adam Dixon. Josiah Pumphrey.
An improved mode of attaching hooks to furniture or fabrics for suspending dresses or parts of dresses, fabrics, curtains and other articles of upholstery or apparel.	1788	16th July 1863	Agatha Montleart. William Tent.
A new or improved dress fastening, which said fastening may also be applied to the fastening of braces, belts and other bands, and to other like purposes.	2001	13th Aug. 1863	Thomas Ashwin.
An improved fastening for leggings, stays or other articles	2062	19th Aug. 1863	Simon Sanderson.
Fastening gloves - - - - - -	2182	3rd Sept. 1863	Joseph Loebl. Ignaz Pick.
A new or improved dress fastening, which said fastening is also applicable to the fastenings of bands and belts, and to other like purposes.	2204	8th Sept. 1863	Joseph Horatio Cutler.
Manufacture of buttons - - - - -	2300	18th Sept. 1863	Henry Charles Huskinson.
An improved clasp or fastening for gloves or other wearing-apparel, for umbrellas, travelling bags or other similar objects.	2631	24th Oct. 1863	Louis Joseph Hannart.
An improved coupling or buckle - - -	2740	5th Nov. 1863	Bewicke Blackburn.
Pins, brooches, buckles and other ornaments to be applied to various articles of wearing-apparel.	2824	12th Nov. 1863	Philip Bettle.
Buckles for brace and other dress fastenings -	3081	8th Dec. 1863	John Henry Brierley.
Improved fastenings for scarfs, ribbons, neckties and other articles of dress, by means of a ring with a spring clasp or chain band or pliable shank.	3303	31st Dec. 1863	William Fulford Brown.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CALCULATING AND NUMBERING.			
A translucid cylindric apparatus for bringing the former weights and measures into those of the present decimal system most easily and precisely, and vice versâ.	826	31st March 1863	Amedée Barthelemi Donat Maurand.
A new or improved daily balance book with moveable or sliding tickets or slips. (*Communicated by Emile Cauderon.*)	1455	11th June 1863	Charles Louis Van Tenac.
Construction of numbering machines - - (*Communicated by Wilhelm Hof and Thomas Ward.*)	2004	13th Aug. 1863	Marc Antoine François Mennons.
An apparatus applicable to time, fare, distance and other tables, almanacs, arithmetical calculations, postal and other boxes.	2882	18th Nov. 1863	Thomas Christopher Kimpton.
CANDLES; CANDLE AND LAMP WICKS.			
Manufacture of candles - - - - (*Communicated by Pierre Louis Durand.*)	266	29th Jan. 1863	Richard Archibald Brooman.
Machinery or apparatus and method to be used in the manufacture of every description of candles, tapers and other lights.	364	10th Feb. 1863	Montague Wigzell.
Lamps and lamp wicks - - - - - (*Partly communicated by David Eldon Hall.*)	747	20th March 1863	Vasconcellos Houghton.
Wicks for lamps - - - - - (*Communicated by Joseph Hays Connelly.*)	864	6th April 1863	Frederick Collier Bakewell.
Manufacture of candles and soap - - -	1507	16th June 1863	William Score.
An improved composition suitable for the manufacture of candles and other like articles and of pomatum, and an improved wick for burning with such composition.	1610	26th June 1863	Gottlieb Boccius.
Certain improvements in the mode of treating fatty bodies.	1778	16th July 1863	Hypolite Mège.
Machinery or apparatus to be used in the manufacture of candles. (*Communicated by Chretien Haffner.*)	2101	25th Aug. 1863	William Edward Gedge.
Improvements in cigar lighters and fusee matches, part of said improvements being applicable also to vestas and matches, wax tapers and candles.	2260	15th Sept. 1863	Charles Battcock.
Lamps and lamp wicks - - - - (*Partly communicated by David Eldon Hall.*)	2305	18th Sept. 1863	Vasconcellos Houghton.
CARDS AND PLAYING CARDS.			
Card cases - - - - -	1068	28th April 1863	George Samuel Macdonald.
Manufacture of show cards - - - - -	1411	8th June 1863	James Hogg, junior.
Printing machinery - - - - (*Printing cards.*) (*Communicated by Gustave Gilbert Leboyer.*)	1573	22nd June 1863	William Edward Newton.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CARDS, &c.—*continued.*			
Manufacture of playing cards - - -	2679	30th Oct. 1863	Alphonse René Le Mire Normandy.
Manufacture of show cards, window tickets and ornamental labels, as advertising mediums.	2698	31st Oct. 1863	Anton Wasserburger. Theodore Bessunger.
CARRIAGES, OMNIBUSES, WAGGONS, CARTS, TRUCKS, VELOCIPEDES.			
Apparatus applied to perambulators, invalid chairs and other carriages.	100	13th Jan. 1863	Thomas George Lewis.
Improvements applicable to omnibuses and other like carriages to adapt them for use on rail or tram roads as well as common highways.	137	15th Jan. 1863	James Parker Bath.
Couplings for railway carriages - - - (*Communicated by George Collyer.*)	282	30th Jan. 1863	William Edward Newton.
Certain improvements in the construction of and mode of applying wings or dirt screens over the wheels of carriages.	378	11th Feb. 1863	Henry Wycherley.
An improved omnibus - - - - (*Communicated by Justin François Audineau.*)	416	16th Feb. 1863	Charles Denton Abel.
Improvements in window frames and in glazing windows. (*For carriages.*)	536	26th Feb. 1863	Henry Walter Brown.
Improvements in the construction of underground railways or subways, and in carriages to be used or worked therein.	557	27th Feb. 1863	Arthur Dudgeon. George Frederick Lee Meakin. Edward Ellis Allen.
Certain improvements in springs to be employed in the manufacture of beds, seats, or for similar purposes where an elastic surface is required. (*For railway carriage seats.*)	619	5th March 1863	Robert Doyne Dwyer.
Carriages - - - - - -	656	9th March 1863	John Richardson Gorst.
Apparatus for making certain indications in railway carriages. (*Name discs.*)	759	21st March 1863	Frank Applegate.
Railway carriage doors - - - -	799	26th March 1863	Frank Applegate.
Construction of omnibuses, railway carriages and other vehicles.	837	1st April 1863	Joseph Bray.
Securing or connecting the bearing springs of railway carriages and waggons to the axle-boxes of the said carriages and waggons.	885	8th April 1863	John Nurthall Brown.
A semicircular metallic slide, whereby the pole bolt is effectually suppressed, and which can be adapted to every four-wheeled vehicle.	906	10th April 1863	Sainte Aure Couperie.
Improvements in or applicable to railway carriages to mitigate or lessen the effects of collisions to passengers.	918	11th April 1863	Walter Samuel.
An improved method and apparatus for loading carts and waggons with hay, straw and other similar products.	923	11th April 1863	Charles Atkins Collins.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CARRIAGES, &c.—*continued.*			
Apparatus for the transport of goods (*Communicated by Paulin Gay.*)	946	15th April 1863	William Clark.
Two-wheeled vehicles	991	21st April 1863	John William Nottingham.
Improvements in springs to be used for railway buffers, draw hooks, and also for carrying springs of railway carriages and other vehicles	1102	2nd May 1863	John William Gibson. William Turner.
Carts, waggons and other vehicles	1106	2nd May 1863	Jean Baptiste Dubreuil.
Springs for railway carriages and other purposes (*Communicated by Richard Vose.*)	1113	4th May 1863	George Haseltine.
Carriages	1128	6th May 1863	James Townsend Ward.
Manufacture of sheets, slabs and other articles when fibrous materials are employed. (*For carriages.*)	1158	8th May 1863	Charles Frederick Bielefeld.
Improvements in coupling and disconnecting carriages on railways, and in machinery employed therein. (*Communicated by Bartolomé Castellvi.*)	1183	11th May 1863	Richard Archibald Brooman.
Means or apparatus employed for raising, moving, transporting and refixing military or other targets or mantlets.	1222	15th May 1863	Douglas Monro Fyfe.
Carriages for common roads	1240	18th May 1863	Eleazar Christmas.
Improvements in velocipedes and in the construction of wheels for the same and other carriages.	1280	21st May 1863	Joseph Goodman
Construction of carriages (*Communicated by Charles William Hine Sargent.*)	1309	25th May 1863	Henri Adrien Bonneville.
Certain improvements in carriages and vehicles for railways and other roads.	1310	25th May 1863	Paul Leprovost.
Construction of railway carriages	1363	1st June 1863	James Henson.
An improved apparatus for conveying goods either in bulk or otherwise, whether to or from the warehouse or vessel, having an inclined vertical or horizontal movement, to be worked either by pressure of air or by vacuum and atmospheric pressure. (*See* "HOISTS.")	1366	1st June 1863	Frederick Warwick Smith.
Improvements in apparatus for loading and unloading vessels, and for elevating and otherwise conveying sacks, casks and other packages, parcels or objects from one locality to another. (*Loading carts.*)	1408	8th June 1863	Richard Wallis.
Improvements in locomotive apparatus which is also applicable to other purposes. (*Communicated by Casimer Noël.*)	1447	10th June 1863	William Clark.
Apparatus applied to house and carriage window-sashes for the working and fastening thereof.	1509	16th June 1863	Alexander John Fraser.
A combined machine for collecting and placing in rows, or collecting and elevating into a waggon or elsewhere, hay, corn or other agricultural produce.	1514	17th June 1863	John Banwell.
A new material or compound applicable to the manufacture of pipes or tubes, to caulking or covering ships' bottoms, and to other useful purposes. (*For carriage panels.*)	1550	20th June 1863	Charles Peterson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CARRIAGES, &c.—*continued.*			
Using Apo-elastikon hyphrasma as a new and improved cloth for floors, roofs, walls, tanks, and other linings, being impervious to damp and of great strength and durability. (*For carriage tops.*)	1603	25th June 1863	William Kirrage.
Construction of guns and projectiles, and of carriages, platforms and shields for working and protecting guns.	1615	27th June 1863	George Clark.
Improvements in ordnance and fire-arms, and in projectiles to be used therewith. (*Gun carriages.*)	1628	30th June 1863	Alexander Keene Richards.
Improved arrangements for effecting or aiding in effecting the locomotion of land carriages or vehicles and floating vessels, by manual power or other primary motive agency.	1632	1st July 1863	Thomas Williams.
Breech-loading ordnance and gun carriages -	1653	3rd July 1863	Henry Broadhead. George Murdoch.
Certain improvements in railway carriages - -	1753	14th July 1863	Louis Marcel Bournique. Jean Baptiste Vidard.
An improved waggon or truck to be used on railways - - - - -	1754	14th July 1863	Louis Marcel Bournique. Jean Baptiste Vidard.
Means or apparatus to facilitate the connecting and disconnecting horses and other animals with carriages.	1756	14th July 1863	Carl Oppermann.
Carriage and other springs - - -	1841	23rd July 1863	Andrew Taylor Holden.
Improvements in machinery and apparatus for working coal and other mines, and in apparatus for loading waggons or other vehicles - -	1888	30th July 1863	William Firth. Samuel Firth.
Four-wheeled vehicles - - - -	1891	30th July 1863	Thomas Apps.
Hand trucks - - - - - - (*Communicated by Alexander Douglas.*)	2009	14th Aug. 1863	Samuel Russel Wilmot.
Improved means of preventing accidents upon railways.	2010	14th Aug. 1863	Robert Benjamin Greenwood.
Improvements in machinery for pressing cotton and for crushing and pressing other substances, the said machinery being adaptable for locomotion on railways or on common roads.	2056	18th Aug. 1863	Charles George Wilson.
Machinery for drawing or discharging coke ovens and loading coke waggons.	2092	24th Aug. 1863	Alfred Jobson.
Carriage door handles - - - -	2104	26th Aug. 1863	Thomas Hopkins, junior.
Assistant bearing springs for locomotive engines, railway carriages, waggons and trucks.	2145	31st Aug. 1863	George Attock.
Arrangement or fixing of axles for railway and other carriages.	2155	31st Aug. 1863	Martyn John Roberts.
Construction of railway and other carriages - -	2242	11th Sept. 1863	James Dobbie.
Apparatus applied to railway carriages and trains in order to obtain greater safety to passengers.	2285	17th Sept. 1863	John Gottlieb Ulrich.
Railway carriages and all other springed vehicles -	2297	18th Sept. 1863	John Mason Cook.
The construction of rail and road carriages and improved wheel tires, and an improvement in railway crossings adapting them to such carriages.	2320	21st Sept. 1863	William Elsdon.
Improvements in railway telegraphs and signals, and also in the permanent way and carriages for preventing railway accidents.	2332	21st Sept. 1863	Wilhelm Adolf Von Kanig.

Subject-matter of Pat	Number of Patent.	Date.	Name of Patentee.
ASKS AND BARRELS; CAS			
ufacture of metallic cask	98	20th July 1863	William Simpson. John Hutton.
facture of metallic v ining liquids or sul BOTTLES.")		4th Aug. 1863	William Edward Newton.
d mode of an		h Aug. 1863	Alfred Vincent Newton.
in mac' , cork in n cut		g. 1863	Frederick George Mulholland.
ents in the construc. d in the machinery employed in ture thereof. (*Communicated by Samuel Jefferson Seely Edmund Brown Bulkley.*)		3	Richard Canham. James Deas Jack. illiam Glydon the ounger.
Action of charger or measure for powder flasks, canisters or other vessels. (*For casks.*)	c.		
An improved application of hydraulic apparatus for lowering full casks and other goods, and raising empty casks or vessels.	800	26th Marc.	avies.
Improvements in preventing fermentation in alcoholic and other liquids while drawing them from their containing vessels, and in apparatus for the same. (*Communicated by Charles Pierre Laurens, Adolphe Peret and François de Trégomain.*)	839	1st April 1863	Wm. d Vickers.
Preservation of perishable liquids during the withdrawal or consumption thereof.	844	1st April 1863	Robert Gavin.
Vent-pegs - - - - -	939	14th April 1863	Henry Trapnell.
Construction of casks, barrels, kegs and other analogous articles. (*Communicated by John Connolly.*)	1397	4th June 1863	William Edward Newton.
An improvement or improvements in the manufacture of metallic casks.	1450	11th June 1863	Thomas Maddocks Harrison.
An improved construction of removable head for casks, applicable to the closing of other vessels	1485	13th June 1863	John Solomons Benson. David Jones.
Construction of vents for casks and other vessels -	1741	13th July 1863	Robert Doyne Dwyer.
Machinery for washing and cleansing casks -	1797	17th July 1863	Thomas Johnson.
Improvements in apparatus for stopping the bung-holes of casks and similar vessels, also in tools or implements for fixing and removing such stopping apparatus.	1878	29th July 1863	Nathan Thompson.
Manufacture of casks and other receptacles for containing oil, petroleum and other liquids.	2347	23rd Sept. 1863	Augustus Collingridge.
A new kind of conical packing for taps - -	2395	30th Sept. 1863	Henry Edward Skinner.
An improved mode or method of storing petroleum and other like oils and spirits.	2486	10th Oct. 1863	Samuel Banner.
Improvements applicable to metallic casks and in machinery for the manufacture of the same.	2498	12th Oct. 1863	Thomas Browning.
Improvements in the manufacture of metallic casks, bottles and other similar vessels, and in machinery employed therein - - -	2604	22nd Oct. 1863	Benjamin Noakes. Frederick John Wood.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CARRIAGES, &c.—*continued.*			
Certain improvements in the construction and arrangement of "safety cabs" or other like vehicles.	3245	23rd Dec. 1863	Robert Walter.
See also "AXLES" *See also* "BREAKS." *See also* "WHEELS FOR CARRIAGES." For ventilating carriages, *see* "VENTILATION." For warming carriages, *see* "HEATING." For lighting carriages, *see* "LAMPS."			
CARTRIDGES AND CASES; GUN WADS.			
Improvements in breech-loading fire-arms and in the cartridge cases to be used therewith.	406	14th Feb. 1863	John Henry Walsh.
Ordnance, fire-arms and cartridges - - -	1051	27th April 1863	Westley Richards -
An improved apparatus for charging breech-loading cartridges.	1100	2nd May 1863	Titus Lucretius Bissell.
Improvements in breech-loading fire-arms and in cartridges connected with the same. (*Communicated by Rudolph Mayer.*)	1274	21st May 1863	Edward Thomas Hughes.
Improvements in ordnance and fire-arms, and in projectiles to be used therewith. (*Cartridges.*)	1628	30th June 1863	Alexander Keene Richards.
Cartridges for breech-loading arms - - - (*Communicated by Alfred Isidore Honoré Parent.*)	1738	11th July 1863	Richard Archibald Brooman.
Cartridges - - - - - - (*Communicated by Silas Crispin.*)	1881	29th July 1863	William Edward Newton.
Manufacture of cartridges for blasting and projectile purposes.	1971	10th Aug. 1863	Richard John Cunnack.
Manufacture of cartridges - - - - (*Communicated by Albert Hook.*)	2072	20th Aug. 1863	William Edward Newton.
Manufacture or construction of ball cartridges -	2346	23rd Sept. 1863	William Thomas Eley.
Certain improvements in the manufacture of cartridge bottoms or entire cartridges composed entirely of the same elements.	2597	22nd Oct. 1863	Charles Fusnot.
Machinery for cutting corks, bungs, gun wads, and other similar articles - - - -	2754	6th Nov. 1863	William Davies. George Cate.
Manufacture of skin cartridges - - -	2840	14th Nov. 1863	Henry Gladstone.
Manufacture of cartridges - - - (*Communicated by Albert Hook.*)	2870	16th Nov. 1863	George Tomlinson Bousfield.
Improvements in breech-loading fire-arms and in bayonets and cartridges connected with the same.	2883	18th Nov. 1863	Rudolph Mayer.
An improved explosive compound to be used in the manufacture of cartridges, and an improved mode of manufacturing cartridges therewith -	2888	18th Nov. 1863	William Wigfall. Gottlieb Jolly.
Improvements in breech-loading fire-arms, projectiles and cartridges, and in tools or apparatus for the manufacture of projectiles.	3159	14th Dec. 1863	Thomas Wilson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CASKS AND BARRELS; CASK-STANDS; BUNGS.			
Manufacture of metallic casks and vessels - -	164	19th Jan. 1863	John James Lundy.
Manufacture of metallic vessels or receptacles for containing liquids or substances. (*See* "BOTTLES.")	180	21st Jan. 1863	Frederic Augustus Busch.
An improved mode of and apparatus for cleaning casks.	306	3rd Feb. 1863	Thomas Lucker Jacobs.
Improvements in machinery for the cutting of chives, bungs, corks, spiles and vent or other pegs, and also in machinery for manufacturing the knives or cutters employed therein, such machinery being also applicable to the manufacture of trenails and other cylindrical and conical articles.	352	7th Feb. 1863	George Redrup.
Improvements in the construction of metal casks and in the machinery employed in the manufacture thereof. (*Communicated by Samuel Jefferson Seely and Edmund Brown Bulkley.*)	644	6th March 1863	William Edward Newton.
Action of charger or measure for powder flasks, canisters or other vessels. (*For casks.*)	678	12th March 1863	Edward Henry Lomas.
An improved application of hydraulic apparatus for lowering full casks and other goods, and raising empty casks or vessels.	800	26th March 1863	Edward Easton.
Improvements in preventing fermentation in alcoholic and other liquids while drawing them from their containing vessels, and in apparatus for the same. (*Communicated by Charles Pierre Laurens, Adolphe Peret and François de Trégomain.*)	839	1st April 1863	William Clark.
Preservation of perishable liquids during the withdrawal or consumption thereof.	844	1st April 1863	Robert Gavin.
Vent-pegs - - - - -	939	14th April 1863	Henry Trapnell.
Construction of casks, barrels, kegs and other analogous articles. (*Communicated by John Connolly.*)	1397	4th June 1863	William Edward Newton.
An improvement or improvements in the manufacture of metallic casks.	1450	11th June 1863	Thomas Maddocks Harrison.
An improved construction of removable head for casks, applicable to the closing of other vessels	1485	13th June 1863	John Solomons Benson. David Jones.
Construction of vents for casks and other vessels -	1741	13th July 1863	Robert Doyne Dwyer.
Machinery for washing and cleansing casks -	1797	17th July 1863	Thomas Johnson.
Improvements in apparatus for stopping the bung-holes of casks and similar vessels, also in tools or implements for fixing and removing such stopping apparatus.	1878	29th July 1863	Nathan Thompson.
Manufacture of casks and other receptacles for containing oil, petroleum and other liquids.	2347	23rd Sept. 1863	Augustus Collingridge.
A new kind of conical packing for taps - -	2395	30th Sept. 1863	Henry Edward Skinner.
An improved mode or method of storing petroleum and other like oils and spirits.	2486	10th Oct. 1863	Samuel Banner.
Improvements applicable to metallic casks and in machinery for the manufacture of the same.	2498	12th Oct. 1863	Thomas Browning.
Improvements in the manufacture of metallic casks, bottles and other similar vessels, and in machinery employed therein - - -	2604	22nd Oct. 1863	Benjamin Noakes. Frederick John Wood.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CASKS, &c.—*continued.*			
Machinery for cutting corks, bungs, gun wads and other similar articles - - -	2754	6th Nov. 1863	William Davies. George Cate.
Mode of and apparatus for stopping or closing orifices in casks and other vessels.	2905	19th Nov. 1863	Joseph Collyer.
Improvements in the manufacture of metal drums and cans for holding oils and other fluid matters, and in furnaces used in such manufacture.	2911	19th Nov. 1863	William Benjamin Hodson.
Manufacture of metallic drums, kegs, casks and like cylindrical packages.	2933	21st Nov. 1863	David Cope.
Improved machinery for manufacturing casks -	3166	15th Dec. 1863	James Davidson.
Mode of and apparatus for controlling the passage of fluids to and from casks and other vessels. (*Communicated by the Société Hermann Lachapelle et Glover.*)	3226	21st Dec. 1863	Michael Henry.
CASTING AND MOULDING METALS; MANUFACTURE OF CASTINGS.			
Improvements in the manufacture of cast iron pipes and the apparatus employed for that purpose. (*Communicated by William Hainsworth.*)	179	21st Jan. 1863	Thomas Wright.
Manufacture of cast iron pipes, columns or any description of tubing.	465	20th Feb. 1863	William Hainsworth.
Apparatus for moulding - - - -	472	21st Feb. 1863	Robert Thompson.
Core barrels - - - - - - -	745	20th March 1863	John Nield. Thomas Arthur Nield.
An improvement or improvements in moulds to be used for casting steel or homogeneous iron.	818	30th March 1863	Robert Mushet.
Improvements in making moulds for casting and in apparatus connected therewith.	846	2nd April 1863	John Warren Law. John Inglis.
A new and improved mode of manufacturing type for letter-press printing.	1030	25th April 1863	Samuel Harrison.
Improvements in making moulds for casting and and in apparatus therefor.	1164	9th May 1863	James Norie.
Manufacture of bells and of resisting and non-cutting tools. (*Communicated by Henri Micolon.*)	1302	23rd May 1863	Richard Archibald Brooman.
Projectiles for ordnance - - - -	1334	27th May 1863	William Palliser.
Permanent way of railways - - - -	1441	10th June 1863	Russel Aitken.
An improved apparatus for shaping plastic materials and hot but not melted metals, by means of pressure, percussion or rolling. (*Communicated by Elbridge Wheeler.*)	1502	16th June 1863	Francis Stanton Williams.
Machinery for making moulds to be employed when casting metal.	1530	18th June 1863	Robert Jobson.
Improvements in the ornamentation of silver, German silver, Britannia metal, electroplated or other plated goods.	1595	24th June 1863	Thomas Skinner.
Construction of railways and tramways - -	1739	11th July 1863	Hugh Greaves.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CASTING METALS, &c.—*continued.*			
Manufacture of hollow cutting tools (*Casting.*)	1808	20th July 1863	William Simpson. John Hutton.
Machinery or apparatus for moulding and casting hollow projectiles. (*Communicated by Jean Simon Voruz, senior.*)	1925	4th Aug. 1863	William Edward Newton.
An improved mode of and apparatus for producing stereotype plates. (*Communicated by Stephen Davis Tucker.*)	1934	5th Aug. 1863	Alfred Vincent Newton.
Improvements in pipe castings for gas, water, sanitary and other general purposes, and the introduction of an elastic chemical compound to form expansive joints thereto, for prevention of leakage.	1950	7th Aug. 1863	Frederick George Mulholland.
Machines for the preparation of moulds for casting	1990	12th Aug. 1863	Richard Canham.
Moulding or shaping metals	2211	8th Sept. 1863	James Deas Jack.
Improvements in apparatus and machinery for the manufacture of metallic tubes and hollow cylinders, part of which improvements may also be applied to the casting of other hollow bodies.	2217	9th Sept. 1863	William Glydon the younger.
Improvements in the manufacture of iron and steel, and in apparatus to be employed in such manufacture. (*Communicated by William Gerhardt.*)	2293	18th Sept. 1863	George Davies.
An improvement in the manufacture of cast steel tyres. (*Communicated by Jacob Mayer.*)	2317	19th Sept. 1863	Thomas Edward Vickers.
Cast iron pit tubbing	2459	7th Oct. 1863	John Gibson.
Improvements in the manufacture of hoops and tires for railway wheels and other purposes, and in the machinery employed therein.	2493	12th Oct. 1863	Peter Rothwell Jackson.
Manufacture of copper rollers used for printing calico or other materials	2561	20th Oct. 1863	William Ingham. Isaac Wood.
An improvement or improvements in the manufacture of moulds for casting studs for chains.	2563	20th Oct. 1863	David Mills.
Improvements in the construction of iron and other ships, vessels and batteries of war, and of cupolas and armour plates applicable thereto, parts of which improvements are also applicable to other useful purposes. (*Casting lead packing.*)	2690	30th Oct. 1863	Barnabas Russ.
Treatment and application of steel and homogeneous metal.	2743	5th Nov. 1863	Joseph Whitworth.
Manufacture of railway bars	2744	5th Nov. 1863	Henry Bessemer.
Casting ingots of steel	2760	6th Nov. 1863	William Daniel Allen.
Wheels, tires, axles and axle-boxes, and modes of applying them.	2896	19th Nov. 1863	William Bridges Adams.
An invention, firstly, for casting steam cylinders of steam-engines in the form of a segment of a cylindrical ring or circle, and secondly, for the machine for boring them truly cylindrical and retaining the line of the bore on the curve of a true circle. (*Communicated by Samuel Woodruff and Henry B. Beach.*)	3103	9th Dec. 1863	William Henry Cole.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CASTING METALS, &c.—*continued.*			
Shields or tips for boots and shoes - - - (*Communicated by Horace Bearce.*)	3256	23rd Dec. 1863	John Henry Johnson.
CASTING AND MOULDING PLASTIC MATERIALS; MANUFACTURE OF MOULDED ARTICLES; PLASTIC COMPOSITIONS; MOULDING FUEL.			
An improvement or improvements in glasses for lamps used in ships, railway carriages, and for other like purposes.	10	1st Jan. 1863	William Robinson.
Improvements in the construction and mode of working apparatus to be employed in pressing, moulding, shaping, embossing, crushing, shearing and cutting metallic and other substances. (*Moulding fuel.*)	37	5th Jan. 1863	Henry Bessemer.
Improvements in apparatus for casting or moulding articles in glass and in imitation of precious stones or marbles.	184	21st Jan. 1863	Adolphe Boubee.
Combining plastic substances with metals - -	365	10th Feb. 1863	Matthew Cartwright.
An improved plastic compound for dental purposes, to be used instead of wax, gutta-percha or resinous gums, in taking the impression of the mouth. (*Partly communicated by Edward Billard.*)	379	12th Feb. 1863	Frederick Oppenheim.
Manufacture of saddles - - - - - (*Moulding.*)	499	24th Feb. 1863	John Clay.
Improvements in machinery for digging, compressing and moulding peat or turf, and for retorts and kilns for drying peat or turf, and making peat or turf charcoal, through the agency of hydro-caloric or superheated steam, and for collecting the products of distillation whilst charring the peat or turf.	528	25th Feb. 1863	Thomas Vincent Lee.
Manufacture of articles of pressed glass - -	642	6th March 1863	Thomas George Webb.
A new and improved mode of inlaying gold and other metals in glass, and in a composition suitable for the manufacture of jewellery and other ornaments, buttons and other similar articles - - - - - -	720	18th March 1863	William Charles Wild. James Henry Randel.
Apparatus connected with machinery used in manufacturing compressed fuel.	801	26th March 1863	John Grantham.
Machinery for shaping metal and plastic substances	819	30th March 1863	Hesketh Hughes.
Moulding machines - - - - -	915	11th April 1863	Frederick Versmann.
An improved method of re-forming and re-using old or waste vulcanized india-rubber - -	985	21st April 1863	Alfred Ford. Richard Rigg.
Moulding articles of china or other clay or of other plastic materials.	1000	22nd April 1863	François Durand.
Manufacture of cementitious substances - - (*For moulding.*)	1073	28th April 1863	Henry Young Darracott Scott.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CASTING PLASTIC, &c.—*continued.*			
Improvements in apparatus for manufacturing beton and artificial stone, pugging clay and other similar purposes, and in the production of artificial stone and artistic, ornamental and decorative articles, works and surfaces. (*Communicated by François Coignet.*)	1086	29th April 1863	Michael Henry.
Moulding or shaping lozenge paste or other plastic materials.	1151	8th May 1863	Henry Schooling.
Manufacture of sheets, slabs, and other articles when fibrous materials are employed.	1158	8th May 1863	Charles Frederick Bielefeld.
A new or improved mode of manufacturing tablets to be used for monumental purposes.	1182	11th May 1863	James Parkinson.
Construction of and mode of working hydrostatic presses and hydraulic apparatus. (*For moulding.*)	1439	9th June 1863	Henry Bessemer.
An improved apparatus for shaping plastic materials and hot but not melted metals, by means of pressure, percussion or rolling. (*Communicated by Elbridge Wheeler.*)	1502	16th June 1863	Francis Stanton Williams.
Moulding and vulcanising articles of india-rubber -	1506	16th June 1863	Josiah George Jennings. Manuel Leopold Jonas Lavater.
A new material or compound applicable to the manufacture of pipes or tubes, to caulking or covering ships' bottoms, and to other useful purposes.	1550	20th June 1863	Charles Peterson.
Improvements in lining iron and other tubes and hollow vessels, and in manufacturing corrugated tubes of plastic materials.	1618	27th June 1863	John Chatterton.
Machinery or apparatus for moulding or shaping pottery ware. (*Communicated by Robert Marcher.*)	1627	30th June 1863	John Henry Johnson.
An improved machinery for wringing clothes -	2132	29th Aug. 1863	Henry William Putnam.
Hydraulic apparatus - - - - - (*Presses for moulding.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Improvements in side lights for ships and other navigable vessels, and in the manufacture of the same.	2229	10th Sept. 1863	John Hays Wilson.
Machinery for manufacturing moulded articles of india-rubber. (*Communicated by John Green.*)	2330	21st Sept. 1863	Hiram Hutchinson.
An improved method of compounding by agglomeration artificial fuel - - - - -	2334	22nd Sept. 1863	Gustave Maillard de Bayelt. Joseph Emile Vigouléte.
An improved plastic composition applicable to the coating of metallic and other surfaces.	2371	26th Sept. 1863	James Spence.
Tablets, show-bills and trade announcements used for advertising and other purposes.	2436	5th Oct. 1863	Benjamin George George.
An improved apparatus for moulding and modelling palates, teeth and gums for dental purposes	2445	6th Oct. 1863	William Batchelour.
Improvements in the manufacture of saddles and harness, and in materials for and in ornamenting the same, which improvements are applicable for parts of carriages, dress and coverings for the head, and other articles.	2579	21st Oct. 1863	Thomas Charles Clarkson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CASTING PLASTIC, &c.—*continued.*			
Smoking pipes - - - -	2622	23rd Oct. 1863	Alfred Wardle. Joseph Brindley.
Mode of and apparatus for constructing houses and other structures of plastic materials. (*Communicated by Alphonse Pallu.*)	3228	21st Dec. 1863	Michael Henry.
Shields or tips for boots and shoes - - (*Communicated by Horace Bearce.*)	3256	23rd Dec. 1863	John Henry Johnson.
See also "BOTTLES." *See also* "BRICKS." *See also* "EARTHENWARE." For moulding sugar, *see* "SUGAR."			
CEMENT AND PLASTER.			
Manufacture of cement from gypsum - -	752	20th March 1863	Fédor de Wyldé.
Manufacture of artificial fuel and cement - -	928	13th April 1863	James Lark.
Manufacture of cementitious substances - -	1073	28th April 1863	Henry Young Darracott Scott.
Improvements in apparatus for manufacturing beton and artificial stone, pugging clay and other similar purposes, and in the production of artificial stone, and artistic, ornamental and decorative articles, works and surfaces. (*Mixing concrete.*) (*Communicated by François Coignet.*)	1086	29th April 1863	Michael Henry.
Means of and apparatus for heating, melting, boiling, evaporating and other useful purposes. (*Burning calcareous substances.*)	1824	21st July 1863	Charles Stewart Duncan.
An improved fire-proof cement which may be employed for covering walls, ceilings and floors, and is also applicable in the manufacture of fire-bricks, crucibles, retorts, melting pots, and for other purposes where fire-resisting properties are required.	1908	1st Aug. 1863	Richard Edwin Bibby.
Manufacture of cement - - - - (*Communicated by Samuel Hilton.*)	2034	15th Aug. 1863	George Tomlinson Bousfield.
Limekilns - - - - - - - - -	2048	18th Aug. 1863	Henry Robinson.
An improved composition or coating for the protection and preservation of surfaces of iron, wood and other materials.	2214	9th Sept. 1863	Joseph Lillie. John Haines White.
An improved substitute for whiting, pipeclay and other analogous substances, to be employed to produce a white coating or surface.	2433	5th Oct. 1863	James William Guilmette.
Improvements in the induration of stone, cement, stucco, brick or other analogous materials, also in the manufacture of artificial stone.	2550	17th Oct. 1863	Fédor de Wyldé.
Machinery, apparatus or means for drying, cleaning and cooling grain and other vegetable products. (*Stucco, whiting, &c.*)	2602	22nd Oct. 1863	John Weems.
Preparing cements and varnishes - - -	2629	24th Oct. 1863	James Brown. John Thomas Way. Thomas Mullett Evans.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CEMENT, &c.—*continued.*			
Improvements in machinery for amalgamating or intermixing dry, semi-fluid or aqueous materials, and for agitating solids with liquids, for combining, dissolving or washing the same. (*Making mortar.*)	2947	23rd Nov. 1863	Thomas Carr.
Kilns for calcining ironstone and limestone -	3273	28th Dec. 1863	John Gjers.
CEMENTED AND FLOCKED FABRICS; ADHERING ORNAMENTS AND DEPOSITING METAL ON FABRICS.			
Compound waterproof and ornamental fabrics -	57	7th Jan. 1863	Thomas Storey.
Improvements in producing imitation gilding on paper-hangings and other surfaces, also in metal leaf and metallic or bronze powder suitable for the purpose.	495	23rd Feb. 1863	John Erwood.
Improved means of joining or fastening together lace, blond, quilling or similar materials.	1110	4th May 1863	John Fortune.
A new fabric suitable for trimmings - - - (*Communicated by Jacques Desprez and Georges Montaillé.*)	1120	5th May 1863	Richard Archibald Brooman.
Manufacture of sheets, slabs and other articles when fibrous materials are employed.	1158	8th May 1863	Charles Frederick Bielefeld.
Manufacture of waterproof fabrics - - - (*Communicated by John Foster Greene.*)	1288	22nd May 1863	William Edward Newton.
Improved machinery for the manufacture of waterproof fabrics. (*Communicated by John Foster Greene.*)	1289	22nd May 1863	William Edward Newton.
Machinery employed in the manufacture of wool and hair felting. (*Communicated by Jesse Albert Locke.*)	2697	31st Oct. 1863	Henry Bernoulli Barlow.
Improved covers for umbrellas, parasols or sunshades.	2850	14th Nov. 1863	William Alexander Lyttle.
Improvements in the manufacture of joined blond and in the machinery employed therein.	2960	24th Nov. 1863	John Sibert.
CHAINS; CHAIN CABLES; HOOKS, HOOPS, RINGS.			
An improved cover or protection for steel and other metal springs, ribbands and hoops. (*Communicated by Eugene Lange.*)	420	16th Feb. 1863	Richard Archibald Brooman.
Mooring buoys - - - - - -	590	3rd March 1863	George Fosbery Lyster.
Improvements in hoops or bands for fastening bales, and in machinery or apparatus for making the same.	1162	9th May 1863	Samuel Wilson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CHAINS, &c.—*continued.*			
Chains for cables and other purposes - -	1186	11th May 1863	James Edward McConnell. George Hinton Bovill.
Machinery for making chains or chain cables and rings.	1575	23rd June 1863	John Murray.
Improvements in traction engines and in apparatus for ploughing and tilling land by steam and other power, part of which improvements is also applicable to driving or giving motion to machinery. (*Driving chain.*)	1726	10th July 1863	Richard Hornsby, junior. John Bonnall. William Astbury.
Machinery for rolling hoops and tyres - - -	1832	22nd July 1863	Peter Rothwell Jackson.
Chains - - - - - - -	1853	24th July 1863	Thomas Sturgeon.
Hawse pipes, mooring pipes, and deck chain pipes	1920	4th Aug. 1863	Thomas Hutchinson Baylis.
Certain improvements in the manufacture of wrought iron shackles.	2442	6th Oct. 1863	Edwin Whitehouse.
Improvemements in apparatus for connecting chain cables and for clearing a ship's hawse when foul, and also in apparatus for acting on and presenting strain to the chain cables when ships are riding at anchor.	2527	15th Oct. 1863	Stephen Randoll Smith.
Apparatus for suspending T and other like fastenings and articles to which they are applied.	2528	15th Oct. 1863	Herbert William Hart.
Means of uniting or joining plates or sheets of metal, which invention is applicable to the construction of boilers, tubes and other useful purposes. (*Rings, chains and hoops.*)	2549	17th Oct. 1863	Edward Henry Cradock Monckton.
An improvement or improvements in the manufacture of moulds for casting studs for chains.	2563	20th Oct. 1863	David Mills.
Endless chain horse powers. - - - (*Communicated by Stuart Perry.*)	2809	11th Nov. 1863	George Haseltine.
Improvements in the manufacture of tubes, rings and cords of india-rubber, and in covering telegraph wires.	2693	18th Nov. 1863	Josiah George Jennings. Manuel Leopold Jonas Lavater.
Improvements in the construction of dry gas-meters and in the means or apparatus employed therein. (*Forming disc rings.*)	2912	20th Nov. 1863	George Rait. John Winsborrow.
Improvements in testing or measuring the strength and other properties of various materials and structures, and in apparatus therefor. (*Rings or hoops.*)	2970	26th Nov. 1863	David Kirkaldy.
Reefing and furling topsails, topgallant sails and royals. (*New form of hook.*)	3035	2nd Dec. 1863	Henry Duncan Preston Cunningham.
Improvements in the manufacture of welded iron chain and welded steel chain, and in tools to be employed in the said manufacture.	3217	21st Dec. 1863	Edward Tangye.
Manufacture of bracelets and other ornaments formed of paper or papier mâché or other similar material.	3269	24th Dec. 1863	Thomas William Davenport. Samuel Cole.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CHARCOAL, COKE, CARBON, MOULDERS' BLACKING, LAMP-BLACK.			
An improved hot air stove where peat charcoal is the fuel employed, and for the method of using peat charcoal or other suitable fuel in connection with the said stove or other stoves, for the purpose of purifying or filtering the gaseous products of combustion. (*See* "FIRE-PLACES.")	315	4th Feb. 1863	Joseph Judge Hays.
Improvements in machinery for digging, compressing and moulding peat or turf, and for retorts and kilns for drying peat or turf, and making peat or turf charcoal, through the agency of hydro-caloric or superheated steam, and for collecting the products of distillation whilst charring the peat or turf.	528	25th Feb. 1863	Thomas Vincent Lee.
An improved furnace for the revivification of animal charcoal.	603	4th March 1863	Jean François Gits.
Improvements in furnaces which are principally applicable to the smelting of iron - - - (*Producing coke.*)	972	18th April 1863	Charles William Siemens. Frederick Siemens.
Manufacture of lamp-black - - - - (*Communicated by Johan Ephraim Lundgren.*)	1170	9th May 1863	Richard Archibald Brooman.
Improvements in the preparation or treatment of peat or turf, and the manufacture thereof into charcoal and other fuel, drain pipes, building and other tiles, and in apparatus used therein.	1255	19th May 1863	John Kelly.
Improvements in coke ovens and in building and heating ovens or retorts for generating coal gas connected therewith.	1287	22nd May 1863	George Stevens.
Improved means of and apparatus for reducing charcoal and other friable substances to fine or impalpable powder, particularly applicable to the manufacture of a substitute for lamp-black. (*Communicated by Johan Ephraim Lundgren.*)	1774	15th July 1863	Richard Archibald Brooman.
The manufacture of a new product from peat and peat tar. (*Lamp-black.*) (*Communicated by Edmund Hess.*)	1784	16th July 1863	Louis Rudolph Bodmer.
Coke ovens - - - - - (*Communicated by Charles Claude Philibert Nicolas Pernolet.*)	1954	7th Aug. 1863	Richard Archibald Brooman.
Means or apparatus for the production of charcoal and other products from refuse tan and other woody substances.	2029	15th Aug. 1863	Thomas Brooks.
Machinery for drawing or discharging coke ovens and loading coke waggons.	2092	24th Aug. 1863	Alfred Jobson.
A new or improved combined coke oven and hot blast oven or apparatus.	2277	17th Sept. 1863	James M'Ewen.
Improvements in saturating, washing and cleansing charcoal and other matters, applicable also to the separation of syrups from sugar.	2355	14th Nov. 1863	Lauchlan Mackirdy.
Improvements in apparatus for the distillation of coal and peat, and such other substances as are or may be used for the manufacture of solid and liquid volatile hydro-carbons, or for the manufacture of the said hydro-carbons and coke.	2386	18th Nov. 1863.	William Mattie Williams.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CHARCOAL, &c.—*continued.*			
Improvements in and apparatus for washing, cleaning and separating impurities from small coal, coke, ashes or cinders.	2901	19th Nov. 1863.	Isaac Francis.
Improvements in the manufacture of iron and steel, and in the machinery, apparatus and furnaces used therein, and for the production and application of gas to be employed in such manufacture, and the application of parts of the said apparatus to the manufacture of glass and alkali.	3213	19th Dec. 1863	William Henry Tooth.
CHENILLE.			
Improvements in weaving "chenille" and in the machinery or apparatus connected therewith.	1736	11th July 1863	John Orr. John Brinton. John Lewis.
Improvements in the manufacture of chenille and in the machinery or apparatus employed therein. (*Communicated by Louis Bernardin.*)	2220	9th Sept. 1863	Edward Thomas Hughes.
CHEQUES, CHEQUE-BOOKS, BANKERS' BILLS, BANK NOTES.			
Pocket-books, purses, wallets and bill-cases -	792	26th March 1863	William Johnson.
Engraving upon metals - - - - - (*Matrices for bank notes.*) (*Communicated by Louis Charles Emile Vial.*)	795	26th March 1863	George Davies.
Apparatus for ruling paper and other materials, either alone or in combination with typographical or lithographical printing. (*Ruling bill paper.*) (*Communicated by Bonaventure Tournier.*)	1320	25th May 1863	William Clark.
An improved process for making paper transparent and transferring designs. (*For bank notes.*) (*Communicated by Henry Loewenberg and Henry Schoonmaker.*)	1771	15th July 1863	William Clark.
A new method of preventing the forgery of bankers' cheques and other documents, by the use of a stamp and a new apparatus, whereby the issue of stamped documents is controlled.	1993	12th Aug. 1863	Rudolph Wappenstein.
Improvements in printing postage stamps, bankers' bills, shares and other similar documents, and in machinery employed therein.	2306	19th Sept. 1863	Louis François Chezaud. Henry Jeremie Christen.
Improvements in the composition of ink suitable for printing and colouring or shading bank note and other instruments and documents, by the copper plate, lithographic, typographic, xylographic or other processes of printing. (*Communicated by Tracy Edson.*)	3204	19th Dec. 1863	Edward Thomas Hughes.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CHLORINE AND CHLORIDES.			
Manufacture of chlorine and bleaching powder, carbonate of soda and soda ash, and sulphate of iron. (*Communicated by Thomas Macfarlane.*)	126	14th Jan. 1863	William Johnson.
Manufacture of sulphate of soda for conversion into soda and other uses. (*Producing chlorides.*) (*Communicated by Germain Adolphe Thibierge.*)	162	19th Jan. 1863	Richard Archibald Brooman.
Manufacture of potash alum and other salts of potash. (*Chloride of potassium.*)	543	26th Feb. 1863	Peter Spence.
Treating the waste liquors from bleaching powder stills in order to obtain hydro-chloric acid and other products therefrom.	967	17th April 1863	Robert Calvert Clapham.
New employment of magnesia and its combinations in manufactures - - - - (*Chloride of potassium.*)	1776	15th July 1863	Doctor Christian. Gustav Clemm.
CHURNS; MILKING COWS; DAIRY FITTINGS.			
Apparatus for churning milk and mixing liquid compounds.	159	19th Jan. 1863	John Laurie.
An improved machine or apparatus for washing, squeezing, mangling and churning.	943	15th April 1863	James Leach.
An improved apparatus for milking cows - - (*Communicated by Thomas Barland.*)	1044	25th April 1863	Margaret Barland.
Improvements in apparatus for withdrawing milk from cows and other mammiferæ, and for conducting it when withdrawn to appropriate receivers - - - - - (*Partly communicated by Thomas Barland.*)	1062	29th April 1863	Margaret Barland. Edward Henry Cradock Monckton.
Means of and apparatus for churning - -	1660	3rd July 1863	Evangeli Lelios.
Improved apparatus for milking - - (*Communicated by Louis Grasset.*)	1688	7th July 1863	William Edward Gedge.
Certain improvements in machinery or apparatus for churning.	2011	14th Aug. 1863	Edward Taylor.
Certain compositions for preserving cheese - - (*Communicated by Jean Neuenschwander.*)	2338	22nd Sept. 1863	Richard Archibald Brooman.
Improvements in washing, cleansing, salting and packing butter, and in apparatus to be used therein.	2465	8th Oct. 1863	Michael Smith.
CISTERNS, RESERVOIRS AND TANKS; PAILS.			
Construction of air-tight boxes, cases, cupboards and similar vessels. (*Cisterns.*)	276	29th Jan. 1863	Frederick George Stuber.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CISTERNS, &c.—*continued.*			
Improvements in drainage and in water-closets, and in the means and apparatus necessary for the same respectively.	1096	1st May 1863	Edward Jones.
Apparatus for straining and drawing off liquids - (*For cisterns, tanks, &c.*)	1105	2nd May 1863	Samuel John Bartlett.
Locomotive engines and tenders - - -	1135	6th May 1863	Archibald Sturrock.
An improved construction of removable head for casks, applicable to the closing of other vessels. (*Closing tanks.*)	1485	13th June 1863	John Solomons Benson. David Jones.
An improved means for the protection and preservation of lead surfaces exposed to the action of water, and for the protection of such surfaces from decomposition by atmospheric action. (*Cisterns.*) (*Communicated by Professor Dr. Henry Schwarz.*)	1519	17th June 1863	Fédor de Wyldé
Using Apo-elastikon hyphrasma as a new and improved cloth for floors, roofs, walls, tanks and other linings, being impervious to damp and of great strength and durability.	1603	25th June 1863	William Kirrage.
Water-closets, commodes, slop-pails and other like apparatus or utensils.	1818	20th July 1863	Robert Weare.
Improvements in making all woven and thready fabrics waterproof, and in finishing or surfacing fabrics generally. (*For buckets.*) (*Communicated by Etienne Guillaumé.*)	1836	22nd July 1863	Charles Bealay.
Improved method of storing and holding petroleum and other oils, naphtha and other products of distillation containing essential oils. (*Communicated by Seth Haskell Ingalls.*)	2115	27th Aug. 1863	Theodore Bourne.
An improved method of constructing magazines for the safer and more economical storing of volatile oils in localities where the ground and labour are expensive. (*Communicated by Moritz Pinner.*)	2309	19th Sept. 1863	James Fraser.
Machinery for manufacturing moulded articles of india-rubber. (*Pails, &c.*) (*Communicated by John Green.*)	2330	21st Sept. 1863	Hiram Hutchinson.
An improved mode or method of storing petroleum and other like oils and spirits.	2486	10th Oct. 1863	Samuel Banner.
Manufacture of bricks, drain pipes, traps, sewage tanks, and water-closet pans and valves, and the machinery and apparatus necessary for the same.	2708	31st Oct. 1863	Edward Jones.
An improved pneumatic apparatus for filling barrels used for watering roads and other purposes.	3285	29th Dec. 1863	Louis Edouard Desestre.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CLOCKS, WATCHES AND OTHER TIME-KEEPERS; WATCH KEYS, CHAINS AND GUARDS.			
Manufacture of clocks - - - - (*Communicated by Tony Pocachard.*)	170	20th Jan. 1863	Henri Adrien Bonneville.
Machinery for engraving by means of electricity - (*Watch cases, dials, &c.*)	633	6th March 1863	Michel Jourdin.
Time indicators - - - - - -	760	21st March 1863	Frank Applegate.
Certain improvements in watches and other time-keepers.	1131	6th May 1863	Samuel Dunseith MacKellen.
Watches - - - - - - -	1339	28th May 1863	Charles Eugene Laederich.
An indicator for railway trains - - - (*Clockwork.*)	1407	8th June 1863	William Armitage Brown.
Certain new and useful improvements in watches or time-keepers.	1690	7th July 1863	George Potter Reed.
Barometers or gauges for measuring the pressure of fluids. (*Barometer and watch.*) (*Communicated by Felix Richard.*)	1715	9th July 1863	William Edward Newton.
An improved calendar or date denoting apparatus - (*See* "MEASURING LENGTH.")	1747	13th July 1863	George Henry Barber.
A self-acting electro-magnetic clock-work signal for railway purposes.	1767	15th July 1863	Edward Funnell.
Watches and other time-keepers - - - (*Communicated by Adrien Philippe.*)	1828	21st July 1863	Richard Archibald Brooman.
A new division of time and the application thereof to mathematical and other instruments.	2107	26th Aug. 1863	Santini Fattorini.
An improved watch - - - - - (*Communicated by Charles Jaeger.*)	2150	31st Aug. 1863	William Edward Gedge.
Construction of chronometers and other time-keepers.	2184	4th Sept. 1863	Charles Grant Kelvey. William Holland.
Articles or instruments for supporting, holding or carrying parasols, bags, watches, ornaments or other articles or appendages.	2309	19th Sept. 1863	Richard Couchman.
Manufacture of watches - - - -	2463	8th Oct. 1863	Amedée Paulin Charpentier.
An improvement in watches, consisting in the construction of cylindrical dead-beat independent centre seconds watches.	2612	23rd Oct. 1863	Benjamin Marriott.
Clocks, watches and other time-keepers - - (*Communicated by Felix Cenoni Bouscatie.*)	2675	28th Oct. 1863	Richard Archibald Brooman.
Clock-work movements - - - - (*Communicated by Michel Ange Bosio.*)	2711	2nd Nov. 1863	William Edward Newton.
Certain improvements in keyless watches. (*Communicated by Frederic Parrot and Charles Martin.*)	2788	10th Nov. 1863	John Conrad Habicht.
Dead-beat independent centre seconds watches -	2827	13th Nov. 1863	Benjamin Marriott. Charles Radcliff.
An apparatus applicable to time, fare, distance and other tables, almanacs, arithmetical calculations, postal and other boxes. (*Applicable to clock stands.*)	2882	18th Nov. 1863	Thomas Christopher Kimpton.
An improved watch case pendant, applicable also to other articles.	2943	23rd Nov. 1863	Charles Howard.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CLOCKS, &c.—*continued.*			
Improvements in and applicable to watches to obtain or produce independent centre seconds -	2990	28th Nov. 1863	Edward Bevan. William Sydney Weare.
A new or improved self-acting time register -	2997	30th Nov. 1863	William Campion. George Wilson. Alfred Wilson.
Improvements in heating, parts of the invention being applicable to other purposes - - (*For astronomical purposes.*)	3055	5th Dec. 1863	Samuel Alfred Varley. Cromwell Fleetwood Varley.
Fastenings for brooches and other articles of jewellery. (*Watch hooks.*)	3106	9th Dec. 1863	Thomas Perks.
Watches - - - - - -	3177	16th Dec. 1863	Jules Gouvernon.
A holder or suspender for holding cotton and other reels, spools or balls, parts of which are also applicable for other useful purposes - (*Watch hook.*)	3224	21st Dec. 1863	Edwin John Green. Richard Mason.
COATING, COVERING, PLATING, SHEATHING.			
I.—Coating, Plating, Lining and Facing Metallic Surfaces with Metals or other Substances.			
Certain improvements in treating or covering strip steel or other suitable material for the making of crinoline skirts and other similar purposes for which the same may be applicable, and which same treatment or covering may be used for trimming or strengthening certain parts of ladies' dresses - - - -	29	3rd Jan. 1863	William Tolson. Charles Brown.
Covering wire, crinoline steel or hoops for skirts -	54	7th Jan. 1863	Thomas Frederick Cashin.
Certain improvements in telegraphic cables -	104	13th Jan. 1863	William Platts. John Bailey.
Improvements in the manufacture of coated metallic sheets or plates and pieces, and in apparatus to be used therein.	123	14th Jan. 1863	Edmund Morewood.
Improvements in machinery for plaiting cotton thread or other fibrous material over steels for crinolines, and in the mode of securing the plaiting to prevent it slipping thereon.	161	19th Jan. 1863	Henry Rushton.
Improvements in covering wire and other iron articles for the purpose of protecting them from oxidation, and in the mode or method employed therein.	163	19th Jan. 1863	William Henry Harrison.
Colouring, bronzing and preserving iron and steel - (*Communicated by Claude Joseph Thirault.*)	171	20th Jan. 1863	Henri Adrien Bonneville.
Manufacture of metallic vessels or receptacles for containing liquids or substances.	180	21st Jan. 1863	Frederic Augustus Busch.
Improvements in the manufacture of lead, tin and other metals or amalgamation of metals of a like fusible nature into sheets of any required thickness and length, and also coating one or both sides of pipes and sheets of lead and other metal or amalgamation of metals with tin or other substances, and in the apparatus connected therewith.	388	13th Feb. 1863	Jabez Jones.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
COATING, &c.—*continued.*			
An improved cover or protection for steel and other metal springs, ribbands and hoops. (*Casing with paper.*) (*Communicated by Eugene Lange.*)	420	16th Feb. 1863	Richard Archibald Brooman.
Insulating and supporting telegraph line wires -	464	20th Feb. 1863	Charles William Siemens.
Improvements in insulating and protecting telegraphic and other wires and rods, and in machinery connected therewith.	505	24th Feb. 1863	William Hooper.
Improvements in the manufacture of tin and terne plates and in the apparatus employed therein.	534	25th Feb. 1863	George Tomkins.
Burglar-proof safes and strong-room doors and frames - - - -	594	3rd March 1863	George Price. William Dawes.
Construction of steam-boilers - - -	736	19th March 1863	Henry Wilde.
Apparatus employed in the manufacture of tin and terne plates - - -	738	19th March 1863	John Saunders. Joseph Piper.
Improvements in coating metals and in machinery and apparatus employed in coating metals.	802	27th March 1863	William Millington Morgan.
An improved process for coating iron - - (*Communicated by James Mitchell.*)	841	1st April 1863	William Mitchell.
Apparatus employed in the fusion, manufacture, production and refining of metals.	853	2nd April 1863	Astley Paston Price.
Improvements in insulating the magnetic needle or needles in compasses.	883	8th April 1863	William Simpson.
Improvements in coating or covering lead or alloys of lead with tin or alloys of tin, and in the apparatus employed therein.	891	8th April 1863	Arthur Kinder.
Preventing incrustation in steam-engine boilers -	896	9th April 1863	George Spencer.
Improvements in treating and preparing iron, copper and other wires for telegraphic and other uses, for the purpose of preserving them from corrosion or decay.	963	17th April 1863	Richard Knight.
An improvement in waterproof compounds and in fabrics prepared therewith. (*For coating wire.*)	988	21st April 1863	Edwin Lindsey Simpson.
A mode of lining lead pipe with tin or its alloys -	1025	24th April 1863	William Anthony Shaw.
Manufacture of spoons and forks - -	1048	27th April 1863	Jean Joseph Robert.
Coating wrought or other iron to protect it from corrosion or oxidation. (*Communicated by George Washington Holley.*)	1156	8th May 1863	William Clark.
Certain improvements in apparatus for coating or covering moulded or other surfaces with certain composition or material.	1382	2nd June 1863	Thomas Agnew, junior.
Cooking and culinary utensils - - -	1453	11th June 1863	Edward Deane.
Manufacture of leaden pipes - - - (*Lining with tin.*) (*Communicated by Augustin Henri Hamon.*)	1541	19th June 1863	William Edward Newton.
Certain improvements in the mode or modes of preparing plates, bars or other objects of iron for being coated with metals or alloys.	1580	23rd June 1863	Thomas Fulham Parsons.
Improvements in lining iron and other tubes and hollow vessels, and in manufacturing corrugated tubes of plastic materials.	1618	27th June 1863	John Chatterton.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
COATING, &c.—*continued.*			
Improvements in coating or covering metal sheets with metals or alloys, and in the apparatus employed therein. (*Communicated by Xavier Florentin Girard.*)	1639	1st July 1863	John Henry Johnson.
Certain compositions for protecting metals and metallic articles from oxidation and for coating slate, bricks, pottery and ceramic ware. (*Communicated by Camille Baroness de Lavenant.*)	1646	2nd July 1863	Richard Archibald Brooman.
Coating or preserving iron ships or vessels or iron used for other purposes.	1650	2nd July 1863	Frederick Ransome.
Improvements in the manufacture of telegraphic wires and in the apparatus connected therewith. (*Communicated by Gustave Eugene Michel Gerard.*)	1668	4th July 1863	Henri Adrien Bonneville.
Coating or protecting metallic surfaces - -	1882	29th July 1863	Edwin Sturge.
An improved fire-proof cement which may be employed for covering walls, ceilings and floors, and is also applicable in the manufacture of fire-bricks, crucibles, retorts, melting pots, and for other purposes where fire resisting properties are required. (*For lining furnaces.*)	1908	1st Aug. 1863	Richard Edwin Bibby.
Coating metals - - - - -	1958	7th Aug. 1863	Edmund Morewood.
Improvements in lubricating and in arrangements and mechanism for lubricating the bearings, journals or steps of spindles, shafts, axles and other mechanism. (*Tinning the receptacles containing water.*)	2043	17th Aug. 1863	James Stead Crosland.
Certain improvements in coating or covering crinoline steel.	2046	18th Aug. 1863	John Briggs.
Improvements in the means of and apparatus for electroplating, said apparatus being also applicable to medical purposes.	2088	22nd Aug. 1863	Siegmund Moore.
An improvement in steam-engines - - - (*Lining cylinders with thin metal.*) (*Communicated by Henry Waterman.*)	2226	9th Sept. 1863	Alfred Vincent Newton.
A new application of material for covering crinolines and in the manufacture of the said material.	2369	26th Sept. 1863	Richard Clarke.
An improved plastic composition applicable to the coating of metallic and other surfaces.	2371	26th Sept. 1863	James Spence.
Improvements in the mode of manufacturing submarine telegraph cables, and in apparatus connected therewith, and in the method or principle of laying same, and in the preparation of the several compounds described for electric insulation and other purposes.	2386	29th Sept. 1863	Frederick George Mulholland.
Improvements in the manufacture of woven fabrics applicable to covering telegraph wires.	2387	29th Sept. 1863	Sam Mendel.[1]
An improved manufacture of bands or strips for crinolines.	2484	10th Oct. 1863	George Waide Reynolds.
An improvement in vessels or baths for containing heated metals and fluxes employed in the processes of hardening and tempering steel and steel articles. (*Providing a metallic lining.*)	2497	12th Oct. 1863	William Tarleton Bury.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
Coating, &c.—*continued.*			
Improvements in the manufacture of metallic foils and in the apparatus to be employed therein	2603	22nd Oct. 1863	Arthur Kinder. John Inglis.
Casting ingots of steel (*Lining moulds with loam.*)	2760	6th Nov. 1863	William Daniel Allen.
Preventing the escape of heat from steam-boilers and other heated surfaces.	2846	14th Nov. 1863	Edwin Hargraves.
Improvements in the manufacture of tubes, rings and cords of india-rubber, and in covering telegraph wires	2893	18th Nov. 1863	Josiah George Jennings. Manuel Leopold Jonas Lavater.
Improvements in the construction and working of electric telegraphs, and in apparatus connected therewith, partly applicable to other purposes.	3006	1st Dec. 1863	Henry Wilde.
Compounds or compositions for coating or covering iron or wooden ships and vessels, metallic sheathing, telegraph cables and other objects, to preserve them from decay, fouling or other destructive action	3012	1st Dec. 1863	Jesse Gustavus Redman. George Martin.
An improved manufacture of elastic bands applicable to the production of ladies' skirts or "crinolines."	3077	7th Dec. 1863	Charles Brown.
An improved composition for covering steam-boilers and pipes and other surfaces.	3082	8th Dec. 1863	Henry Benson James.
Lawn-mowing and grass-cutting machines (*Galvanising.*) (*Partly communicated by Henry Fisher.*)	3092	8th Dec. 1863	James Edward Boyd.
A new and improved mode or process of covering or insulating wire for telegraphic and other uses or purposes, with twine, cordage and other covering of a like character.	3151	14th Dec. 1863	John Aylesworth Bailey. John James Speed.
Telegraphic cables	3252	23rd Dec. 1863	Frederick Walton.
XI.—Coating, Plating, Lining and Facing Glass, Wood, Stone, Plastic Materials, Textile Fabrics, &c.			
Rendering drum skins and gut strings less liable to hygrometric influences.	222	24th Jan. 1863	Antoine Joseph Sax.
Fabrics for covering floors, walls, roofs and other surfaces or objects, which fabrics are also partly applicable to the manufacture of waterproof articles.	232	27th Jan. 1863	Henry Henson Henson.
Improved preparations or compositions for coating and colouring the walls, ceilings and other parts of buildings.	293	2nd Feb. 1863	Edwin Hope Massey.
Improvements in press papers and in the method or means of drying them and other similar sheets of paper, applicable also for the drying of woven fabrics, yarns, wool, cotton or other fibrous substances. (*Coating with metal.*)	415	16th Feb. 1863	James William Crossley.
Manufacture of oiled silk (*Coating with shellac.*)	457	19th Feb. 1863	William Trustrum.
An improved composition for the coating and preservation of canvas and other materials to make them waterproof and non-inflammable.	735	19th March 1863	Ellis Lever.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
COATING, &c.—*continued.*			
Production of show tablets, advertisement tablets, name plates, architectural facings and decorations, and other ornamental, decorative and inscriptive articles.	1111	4th May 1863	John Morris Johnson. Edmund Johnson. Charles Johnson. Louis Bertling.
Certain improvements in apparatus for coating or covering moulded or other surfaces with certain composition or material.	1382	2nd June 1863	Thomas Agnew, junior.
Manufacture of flexible and other tubes - -	1495	15th June 1863	Isaac Blue Harris.
Improvements in protecting or preserving the silvering or quicking on glass, and in the manufacture of glass vessels for silvering or quicking. (*Communicated by Joseph Jules Anthoine and François Etienne Hyppolite Brossette.*)	1512	16th June 1863	Richard Archibald Brooman.
Certain compositions for protecting metals and metallic articles from oxidation, and for coating slate, bricks, pottery and ceramic wares. (*Communicated by Camille Baroness de Lavenant.*)	1646	2nd July 1863	Richard Archibald Brooman.
Mode of preserving and protecting the silvering of mirrors. (*Communicated by Diodor Briansky.*)	1721	10th July 1863	Marc Antoine François Mennons.
Furnaces for heating air, steam and other elastic fluids. (*Coating pipes of fire-clay.*)	1928	5th Aug. 1863	Edward Alfred Cowper.
Manufacture or production of artificial fuel -	1991	12th Aug. 1863	James Templeman.
Apparatus for serving ropes for ships' rigging and other purposes.	1995	12th Aug. 1863	Robert Stirling Newall.
Certain improvements in machinery or apparatus for preparing and drying clay, and also in machichinery to be employed in the manufacture of bricks and tiles. (*Lining the moulds.*)	2166	2nd Sept. 1863	Joseph Lewis.
Certain improvements in looms for weaving - (*Facing the picking stick with buffalo hide*).	2274	16th Sept. 1863	Edward Scott. John Starkey.
Means or apparatus for coating wood and other surfaces.	2349	24th Sept. 1863	William White.
Manufacture of driving-straps or bands and of flexible tubes or hose.	2367	26th Sept. 1863	George Spill. Thomas James Briggs. Daniel Spill.
Manufacture of india-rubber and gutta-percha compounds. (*For coating fabrics.*) (*Communicated by Lyman Hall.*)	2373	26th Sept. 1863	Lucius Henry Norris.
Preparing cements and varnishes - - - (*Coatings for woven fabrics.*)	2629	24th Oct. 1863	James Brown. John Thomas Way. Thomas Mullet Evans.
III.—Coating, Sheathing and Facing Ships; Compositions for the Purpose.			
Battery plates - - - - - -	2	1st Jan. 1863	William Henry Brown.
An improved method of attaching sheathing to iron or other vessels.	18	2nd Jan. 1863	William Henry Munts.
Mode of uniting metallic surfaces - - (*Sheathing.*) (*Communicated by William Brainerd Barnard.*)	313	4th Feb. 1863	George Haseltine.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
COATING, &c.—*continued.*			
Construction of iron ships or vessels and of armour applicable thereto.	319	4th Feb. 1863	Barnabas Russ.
Armour plating or protecting ships and vessels -	466	20th Feb. 1863	Richard Bell.
Manufacture of armour plates for ships and other structures. (*Communicated by Alexander Holley.*)	481	21st Feb. 1863	John Brown.
Construction and arrangement of armour plates for ships.	497	24th Feb. 1863	Daniel Spink.
Manufacture of armour plates or blocks for defensive purposes.	542	26th Feb. 1863	James Yates.
Improvements in metal sheathing for ships and vessels, and in the securing of such sheathing thereto.	589	3rd March 1863	Robert Saunders.
An improved mode of applying and fastening metal sheathing to the bottoms of iron ships or vessels, and to iron for other uses.	602	4th March 1863	Charles Mark Palmer. John M'Intyre.
Improvements in manufacturing curvated armour plates and other iron work, and in machinery or apparatus employed therein.	614	4th March 1863	William Littell Tizard.
Machinery for the manufacture of nails - - (*Sheathing nails.*)	615	5th March 1863	William Whittle.
Improvements in protecting and preserving the bottoms and sides of ships and other submerged surfaces from oxidation or fouling by incrustation, the attachment of barnacles, the action of animalculæ, or from any other like causes of injury.	641	6th March 1863	Henry Revell Spicer.
Improved armour plates for vessels, turrets, targets, forts and other structures in which armour plates are or may be used - - - - -	655	9th March 1863	William John Clapp. Nathaniel Coats.
Sheathing iron ships, caissons and other like structures.	665	11th March 1863	William Robinson Mulley.
Machinery for rolling armour plates, bridge plates, boat plates, and other plates and bars of iron -	681	13th March 1863	John Harris. Joseph Butler. John Henry Fraser.
A new and useful or improved yellow metal sheathing nail or spike, which by means of a nail cutting engine is cut from yellow sheathing metal.	739	19th March 1863	Samuel Leonard Crocker.
Improvements in protecting the surface of the iron and steel of ships and all other structures except that of cables, tanks and boilers, while in contact with water, from decay, in preventing or abating and in facilitating the removal of foulness of ships' bottoms, and in giving a capacity of increased speed to ships.	776	25th March 1863	John White.
An improved mode of constructing the armour of vessels of war - - - - - -	829	31st March 1863	Archibald Hamilton Bell. Valentine Græme Bell.
Protecting vessels of war and fortifications from the effects of projectiles.	848	2nd April 1863	Douglas Symonds Sutherland.
Improvements in the construction of ships or vessels, part of which improvements are also applicable for constructing buildings, and for various other purposes in which rolled iron is employed.	851	2nd April 1863	William Jones.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
COATING, &c.—*continued.*			
Improvements in the construction of vessels of war, part of which improvements is applicable to fortifications.	914	10th April 1863	Henry Caudwell.
Improvements in welding and rolling metals, and in machinery connected therewith. (*Armour plates.*) (*Communicated by Michel Helson.*)	1091	30th April 1863	Edward Griffith Brewer.
Armour plates of hammered or rolled wrought iron, the whole of the rivets being protected against the direct blows from the cannon shots.	1181	11th May 1863	Charles Louis Van Tenac.
Manufacture of thick plates of wrought iron for armour plates and other purposes - -	1203	13th May 1863	James Edward M'Connell. George Hinton Bovill.
Improvements in preventing the fouling of the bottoms and sides of ships and vessels, particularly applicable to ships and vessels constructed of or sheathed with iron.	1232	16th May 1863	Frederick Maum Burns.
Attaching copper or other sheathing to iron vessels	1278	21st May 1863	Frederic Pelham Warren.
Armour for forts and floating batteries - -	1364	1st June 1863	James Chalmers.
Compositions for coating or covering ships' bottoms	1438	9th June 1863	Henry Frederick M'Killop.
Improvements in constructing the sides of ships, batteries and fortifications, and in applying armour plates thereto.	1460	11th June 1863	Edwin Owen Hallett.
A new material or compound applicable to the manufacture of pipes or tubes, to caulking or covering ships' bottoms and to other useful purposes.	1550	20th June 1863	Charles Peterson.
Coating or preserving iron ships or vessels or iron used for other purposes.	1650	2nd July 1863	Frederick Ransome.
Sheathing or coating iron ships - - -	1746	13th July 1863	Robert Stocks Walker.
Improvements in the construction and protection of ships, vessels and floating batteries, and in the preparation and arrangement of materials for those purposes, some of such improvements being applicable to the construction and protection of land fortifications.	1929	5th Aug. 1863	George Clark.
An improved composition for coating or painting the bottoms of ships or vessels to prevent them from fouling.	1947	6th Aug. 1863	Thomas Simmelkiar. John Ibbetson Spicer.
Improvements in the manufacture and fitting or securing of armour plates, blocks or bars, and in the machinery or apparatus employed therein, parts of which improvements are applicable to heavy forgings generally.	2051	18th Aug. 1863	James Yates.
Machinery for planing curved, curvilinear, irregular and other forms in iron, steel and other metals. (*Ships' armour plates.*)	2077	21st Aug. 1863	Robert Thompson.
An improved composition or coating for the protection and preservation of surfaces of iron, wood and other materials - - - (*Ships' bottoms.*)	2214	9th Sept. 1863	Joseph Lillie. John Haines White.
Machinery for planing or cutting off the sides of armour plates.	2264	16th Sept. 1863	Joseph Fox.
Improved apparatus for cleaning and painting or coating the bottoms of ships and other structures.	2292	18th Sept. 1863	Robert Doyne Dwyer.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
COATING, &c.—*continued.*			
Means of protecting and preserving the hulls and bottoms of ships and vessels from fouling and corrosion.	2295	18th Sept. 1863	Isham Baggs.
Improvements in the construction of iron ships and vessels and in sheathing the same.	2331	21st Sept. 1863	Thomas Barnabas Daft.
An improved plastic composition applicable to the coating of metallic and other surfaces. (*Internal surfaces of iron ships.*)	2371	26th Sept. 1863	James Spence.
Preserving the bottoms of ships or vessels and other surfaces from the prejudicial effects of marine animals and vegetables.	2409	1st Oct. 1863	Percy Leslie, M.D., M.R.C.S., Ed.
Sheathing for navigable vessels of iron or wood, which sheathing is also applicable to the covering of roofs, walls and other purposes.	2478	9th Oct. 1863	John M'Innes.
Means of uniting or joining plates or sheets of metal, which invention is applicable to the construction of boilers, tubes and other useful purposes. (*Copper sheathing.*)	2549	17th Oct. 1863	Edward Henry Cradock Monckton.
Preparing cements and varnishes - - (*For marine purposes.*)	2629	24th Oct. 1863	James Brown. John Thomas Way. Thomas Mullet Evans.
Certain compositions for preserving iron ships and other submerged iron work from corrosion and from fouling.	2641	26th Oct. 1863	Marius Vian.
An improved composition for coating ships' bottoms	2680	30th Oct. 1863	Frederic Newton Gisborne.
Improvements in the construction of iron and other ships, vessels and batteries of war, and of cupolas and armour plates applicable thereto, parts of which improvements are also applicable to other useful purposes.	2690	30th Oct. 1863	Barnabas Russ.
Application of preservative coatings or compositions to the bottoms of ships and vessels.	2732	4th Nov. 1863	John Hornby Maw.
Machinery for cutting and planing iron and other metals, particularly applicable to machinery for cutting and planing armour plates - -	2735	5th Nov. 1863	Greenwood Craven. William Craven. John Craven.
Improvements in preventing the fouling of the bottoms and sides of ships and vessels, particularly applicable to ships and vessels constructed of or sheathed with iron.	2847	14th Nov. 1863	Adolf Ellissen.
Construction of armour for ships of war and land batteries.	2848	14th Nov. 1863	Thomas Symes Prideaux.
Sheathing ships and other vessels - - -	2880	17th Nov. 1863	Joseph Betteley.
An improved composition for coating or covering the bottoms of ships.	2945	23rd Nov. 1863	James Smith.
Compositions applicable to the coating of ships' bottoms.	2974	26th Nov. 1863	James Baker.
Improvements in ships of war and in arming ships of war.	2995	30th Nov. 1863	Augusto Albini.
Compounds or compositions for coating or covering iron or wooden ships and vessels, metallic sheathing, telegraph cables and other objects, to preserve them from decay, fouling or other destructive action - - -	3012	1st Dec. 1863	Jesse Gustavus Redman. George Martin.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
COATING, &c.—*continued.*			
Sheathing iron vessels and armour plated ships -	3014	1st Dec. 1863	Robert Turnbull.
Construction of ships of war and other vessels -	3036	2nd Dec. 1863	Charles Lungley.
Construction of shot-proof iron or steel walls suitable for the sides of war ships, floating batteries or forts.	3202	19th Dec. 1863	Robert Legg.
XV.—Covering Rollers.			
An improved paste or composition to cover the rollers used by letter-press printers.	198	22nd Jan. 1863	James Martin Binger.
Machinery for stretching and drying fabrics - (*Communicated by Alexandre Fortuné Tulpin.*)	1608	26th June 1863	Alfred Tulpin.
Machinery for opening, cleaning and preparing fibrous substances.	1809	20th July 1863	Francis Alton Calvert.
Certain improvements in apparatus for coating or covering the surfaces of rollers or cylinders with leather or other material.	2737	5th Nov. 1863	Edward Kenworthy Dutton.
The application of a certain substance or material for covering rollers used in spinning and preparing cotton, wool and other fibrous substances to be spun.	2914	20th Nov. 1863	Edward Marwood.
Machinery or apparatus for opening, cleaning and preparing cotton and other fibrous materials to be spun.	3056	5th Dec. 1863	James Conlong.
Construction of machinery for ginning cotton -	3079	8th Dec. 1863	William Wanklyn.
COFFEE AND COCOA; COFFEE-POTS AND TEA-URNS.			
Process of and apparatus used in roasting and treating coffee and other organic substances.	719	18th March 1863	William Symington.
Manufacture or preparation of cocoa and chocolate.	964	17th April 1863	Samuel Riley.
An improved process for retaining the aroma of coffee and cocoa.	1088	30th April 1863	Alfred Henry Rémond.
Apparatus for straining and drawing off liquids - (*For tea and coffee urns.*)	1105	2nd May 1863	Samuel John Bartlett.
Improvements in the ornamentation of silver, German silver, Britannia metal, electro-plated or other plated goods. (*Tea services.*)	1595	24th June 1863	Thomas Skinner.
Hydraulic apparatus - - - - (*Used in making chocolate.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Raising the covers or lids of hot water jugs, tea-pots, coffee-pots and other vessels.	2216	9th Sept. 1863	Thomas Naden the younger.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
COFFEE, &c.—*continued.*			
An improved machine for bending metallic pipes or spouts. (*For tea and coffee pots.*) (*Communicated by Elijah Valentine and Moses Thompson Ridout.*)	2779	7th Nov. 1863	George Haseltine.
Taps - - - - - - - - - (*For urns.*)	2791	10th Nov. 1863	Samuel John Bartlett.
COFFINS; EMBALMING.			
Improvements in embalming and preserving from decay human bodies and bodies of other animals, also pickling, curing and flavouring animal bodies.	412	14th Feb. 1863	John Morgan, F.R.C.S.I.
Boxes or cases for the enclosure and preservation of human remains.	909	10th April 1863	Henry Revell Spicer.
COINING, COINS, RECEPTACLES FOR COINS.			
An improved receptacle for gold, silver or other coins.	640	6th March 1863	Thomas Hancock.
Improvements in apparatus for winding, cleaning, measuring, sorting, doubling, throwing and reeling silk, parts of which improvements are also applicable to like machinery for spinning, doubling and twisting cotton, wool and other fibrous materials. (*Or weighing and sorting coins.*)	674	12th March 1863	Frederick Buser Kraushaar.
Hydraulic apparatus - - - (*Presses used for coining.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
COMBS.			
Manufacture of combs - - - -	1624	30th June 1863	Louis François Auguste Baron Marulaz.
Construction of combs for the human hair - -	3053	4th Dec. 1863	Thomas Douglas.
COMPASSES; MEASURING ANGLES; SURVEYING AND LEVELLING; MATHEMATICAL AND ASTRONOMICAL INSTRUMENTS.			
Mariners' compasses - - - - (*Communicated by Georges Fabre.*)	211	23rd Jan. 1863	William Clark.
Mathematical drawing instruments - -	226	26th Jan. 1863	William Ford Stanley.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
COMPASSES, &c.—*continued.*			
Means for rendering ships' and other compasses insensible to local attraction - - - -	401	14th Feb. 1863	John Sacheverell Gisborne. William Simpson.
Means and apparatus for measuring angular and actual distances.	608	4th March 1863	Patrick Adie.
Improvements in mariners' compasses and the parts in connection therewith, and in the application thereof to magnetic instruments.	695	14th March 1863	Robert Alexander.
Insulating the magnetic needle or needles in compasses.	883	8th April 1863	William Simpson.
Improvements applicable to mariners' compasses -	955	16th April 1863	John Laird Mc Lay.
Improvements in indicating the locality of fire, applicable also to denoting the position of ships. (*Telescope and tracer.*)	1055	27th April 1863	William Henry James.
A new or improved instrument for measuring distances and altitudes.	1337	28th May 1863	Charles Thomas Boutet.
A new or improved spirit compass with screw lever.	1409	8th June 1863	Alfred James Hollingsworth.
An electric tell-tale compass - - - -	1553	20th June 1863	Fleeming Jenkin.
Barometers or gauges for measuring the pressure of fluids. (*Barometer and compass.*) (*Communicated by Felix Richard.*)	1715	9th July 1863	William Edward Newton.
Construction and arrangement of nautical and surveying instruments for measuring angles and altitudes.	1717	9th July 1863	George Gowland.
Mariners' compasses - - - - -	1935	6th Aug. 1863	George Gowland.
A new division of time and the application thereof to mathematical and other instruments. (*Applicable to compasses.*)	2107	26th Aug. 1863	Santini Fattorini.
Liquid compasses - - - - - -	2268	16th Sept. 1863	James Rahill.
Improved instruments for ascertaining levels, also for computing angles. (*Communicated by Jean Baptiste Chairgrasse.*)	2279	17th Sept. 1863	William Edward Gedge.
Improvements in the construction of levels applicable to levelling, surveying, astronomical, nautical and other instruments or purposes to which levels are applicable.	2348	23rd Sept. 1863	John Phillips.
Instruments for taking astronomical and other observations. (*Communicated by Charles Emanuel.*)	2674	28th Oct. 1863	Richard Archibald Brooman.
Construction of surveyors' levels and other surveying instruments.	2714	3rd Nov. 1863	Francis John Pastorelli.
Jewel, photograph, instrument and other cases -	3187	17th Dec. 1863	Charles Jeffreys.
CONDENSING, COOLING, FREEZING.			
Apparatus to be used in turkey-red dyeing -	133	15th Jan. 1863	George Graham. John McLeod.
Vessels in which to cool and transport fatty or oleaginous matters, such as tallow, lard, palm oil and the like - - - - -	146	16th Jan. 1863	John Geno Winter. Carroll Eugene Gray.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CONDENSING, &c.—*continued.*			
Improvements in the condensation of steam and in apparatus for the same. (*Communicated by Amédée Mathurin Gabriel Sebillot.*)	274	29th Jan. 1863	William Clark.
Improvements in obtaining and applying motive-power, which improvements or parts thereof are applicable for raising, forcing and measuring fluids. (*Pumps for condensing engines.*)	512	24th Feb. 1863	Robert William Thomson.
Apparatus for the production and transmission of gas or other fluids - - - - -	513	24th Feb. 1863	George Bower. William Hollinshead.
Supplying water to surface condensers of marine engines.	574	28th Feb. 1863	Edward Hayes.
Improvements in the manufacture of sulphuric acid and in apparatus for the same. (*Communicated by Louis Désiré Verstraet and Charles Schmid.*)	611	4th March 1863	William Clark.
An improvement or improvements in refrigerators and other like articles - - - - -	631	5th March 1863	John Morris. Thomas Newton.
Machinery or apparatus for collecting the condensed steam or waste water from places where steam is used, and returning the same to the boiler.	645	9th March 1863	Henry Whittles.
Machinery for drying and cooling grain and seeds - (*Communicated by Jesse Brown Wheeler and Simeon Losee.*)	787	19th March 1863	Henry Osburne Haughton.
Apparatus for cooling liquids - - -	969	17th April 1863	William Massingham.
Surface condensers - - - -	979	20th April 1863	Charles Randolph. John Elder.
Machinery or apparatus for making ices - -	1040	25th April 1863	Alexandre Legras.
Constructing surface condensers and apparatus for heating and cooling fluids.	1052	27th April 1863	Julius Jeffreys.
Improved method of condensing lead and other metallic fumes and vapours from furnaces.	1053	27th April 1863	Frederick Bennett.
Improvements in drying and cooling grain, and in the machinery or apparatus employed therein. (*Communicated by William Henry Sutton and James John Gibson.*)	1066	28th April 1863	John Henry Johnson.
Steam-engines - - - - - - (*Communicated by Francis Bowes Stevens.*)	1159	8th May 1863	George Tomlinson Bousfield.
Condensing machines for working yarns of wool and other fibrous substances. (*See* "SPINNING.")	1247	18th May 1863	Joseph Beaumont.
Surface condensers - - - -	1421	8th June 1863	Edward Humphrys.
Improvements in the manufacture (by the introduction of cocoa nut husk or part thereof) of a substitute for ordinary felt and kamptulicon, and in utilizing said cocoa nut husk or part thereof for packing of wine coolers, refrigerators and ice chests, and caulking of ships and vessels.	1423	8th June 1863	Henry Reynell.
Obtaining certain products from hops.	1428	9th June 1863	George Hills.
Machinery for the manufacture of bolts and rivets. (*Cooling the header.*) (*Communicated by Jacques Victor Gauthier.*)	1536	19th June 1863	Henri Adrien Bonneville.
Apparatus for condensing steam. - - - (*Communicated by Leon Gauchez.*)	1829	21st July 1863	Emile Alcan.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CONDENSING, &c.—*continued.*			
Evaporating and cooling - - - -	1932	5th Aug. 1863	Charles Garton Thomas Hill.
Apparatus for evaporating and distilling - - (*Concentrating sulphuric acid.*)	2106	26th Aug. 1863	Jacques Louis Kessler.
Construction and application of apparatus and implements used for the purpose of heating, cooling and evaporating.	2253	14th Sept. 1863	Henry Riviere.
Construction of apparatus for cooling liquids -	2270	16th Sept. 1863	James Dannatt.
Gas condensers - - - - - - (*Communicated by John Brunt and Alexander Renaux.*)	2344	23rd Sept. 1863	Edward Thomas Hughes.
An improved joint for the tubes of surface condensers. (*Communicated by John Van Voorst Booraem.*)	2363	25th Sept. 1863	Alfred Vincent Newton.
Apparatus for cooling liquids - - -	2438	5th Oct. 1863	John Towlson.
Construction of condensers - - - - (*Communicated by William Judson.*)	2472	8th Oct. 1863	Alfred Vincent Newton.
An improved method of condensing and purifying the fumes and gases arising from the treatment of metals and metallic ores and substances.	2482	9th Oct. 1863	Richard Martyn.
Surface condensers for steam and other vapours - (*Communicated by George Wagstaff Yapp.*)	2566	20th Oct. 1863	William Snell.
Improvements in evaporating, cooling and melting, and in apparatus employed therein.	2575	20th Oct. 1863	Charles Garton. Thomas Hill.
Apparatus for condensing metallic and other fumes	2583	21st Oct. 1863	Gilbert Howell.
Machinery, apparatus or means for drying, cleaning and cooling grain and other vegetable products.	2602	22nd Oct. 1863	John Weems.
An improved refrigerator for cooling worts for brewing, or other liquids requiring cooling, and for improving brewers' refrigerators now in use.	2646	26th Oct. 1863	Alfred Blake.
Improvements in surface condensers, also applicable to the refrigeration or cooling of fluids.	2683	30th Oct. 1863	Henry Cochrane.
Fans for forcing and exhausting air or other gases - (*Condensing metallic fumes, &c.*)	2726	4th Nov. 1863	Edward Hughes.
Certain apparatus for injecting and ejecting fluids -	2775	7th Nov. 1863	Andrew Barclay. Alexander Morton.
Certain improvements in the manufacture of soap - (*Cooling.*)	2781	9th Nov. 1863	Hippolyte Mège.
Improvements in apparatus for the distillation of coal and peat, and such other substances as are or may be used for the manufacture of solid and liquid volatile hydro-carbons, or for the manufacture of the said hydro-carbons and coke.	2886	18th Nov. 1863	William Mattie Williams.
Improvements in furnaces and apparatus for the manufacture of volatile hydro-carbons, which improvements are also in part applicable to furnaces and apparatus for the manufacture of illuminating gas.	2981	27th Nov. 1863	Frederic Page.
Feeding steam-boilers and condensers - - (*Communicated by Claude Jonchier.*)	3236	22nd Dec. 1863	Richard Archibald Brooman.
Apparatus for forging and tempering bayonet blades, files and other articles. (*Cooling apparatus.*) (*Communicated by Hervey Waters.*)	3251	23rd Dec. 1863	George Tomlinson Bousfield.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CONDENSING, &c.—*continued.*			
Improvements in the manufacture of certain descriptions of artificial manure and in apparatus to be employed therein. (*Freezing.*)	3264	24th Dec. 1863	John Maynes.
CONFECTIONARY.			
Process of manufacturing pomfret or liquorice cakes, rolls, sticks and pipes, and other similar articles of confectionery.	479	21st Feb. 1863	William Wood.
Manufacture and ornamentation of pomfret or liquorice cakes, rolls, sticks, and pipes, and other similar articles of confectionery.	667	11th March 1863	William Wood.
Machinery for shaping metal and plastic substances (*Confectionary.*)	819	30th March 1863	Hesketh Hughes.
Machinery or apparatus for making ices - -	1040	25th April 1863	Alexandre Legras.
Moulding or shaping lozenge paste or other plastic materials.	1151	8th May 1863	Henry Schooling.
Treating liquorice root to obtain liquid and solid extracts therefrom. (*For candies.*) (*Communicated by Frumence Nicolas Frezon.*)	1402	5th June 1863	Richard Archibald Brooman.
Machinery for reducing cocoa nut kernels and other substances to a state of pulp.	1468	12th June 1863	John Charles Wilson.
Improvements in the manufacture of liquorice and in the means or apparatus employed therein.	1593	24th June 1863	Samuel Smith.
Hydraulic apparatus - - - - - (*Used in making confectionary.*) (*Communicated by Auguste Desgoffeand Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Means or apparatus for the manufacture of lozenges	3155	14th Dec. 1863	Samuel Smith. Thomas Smith.
COOKING AND APPARATUS USED IN COOKING.			
Apparatus for burning oils and other inflammable fluids as fuel. (*For cooking.*) (*Communicated by Augustus Theodore Schmidt.*)	13	2nd Jan. 1863	Frederick Collier Bakewell.
Ovens, hot plates and cooking apparatus - -	94	12th Jan. 1863	Ebenezer Stevens.
Apparatus for steaming, cooking and generating gas - - - - - - -	248	28th Jan. 1863	John Oglesby. John Dickinson. William Mark Dickinson. John Dickinson the younger.
Tongs or forceps for grasping articles out of reach of the hand - - - - - (*Steak tongs.*)	403	14th Feb. 1863	William Baylis. Thomas Henry Hopwood.
Cooking stoves - - - -	443	18th Feb. 1863	John Henry Bly.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
COOKING, &c.—*continued.*			
An improved stove or fire-grate for heating, cooking, boiling or other similar purposes.	702	16th March 1863	Felix Hoyos.
A new combined range for making gas, cooking by gas and lighting, especially applicable for ships.	762	23rd March 1863	Henry Hancock.
Ovens and apparatus for heating the same -	765	23rd March 1863	Thomas George Grant.
Cooking and culinary utensils - - -	1453	11th June 1863	Edward Deane.
Cooking apparatus - - - -	1657	3rd July 1863	Henry Brinsmead.
Cooking ranges - - - -	1779	16th July 1863	Andrew Watson.
Means of and apparatus for boiling and cooking -	1786	16th July 1863	George Rand.
An improved method of cooking an egg and an improved pan or apparatus for the same.	1948	7th Aug. 1863	Catharine or Katty Liddle.
Improvements in apparatus for cooking and for obtaining fresh water for use on shipboard and otherwise.	2158	1st Sept. 1863	George Russell.
Cooking stoves and apparatus - - -	2404	1st Oct. 1863	Louis Napoleon Legras.
Surface condensers for steam and other vapours - (*Applicable for baking.*) (*Communicated by George Wagstaff Yapp.*)	2566	20th Oct. 1863	William Snell.
Portable cooking apparatus - - -	2672	28th Oct. 1863	Robert Baker Jones.
Apparatus used when cooking - - - (*Gridirons, frying-pans, &c.*)	3043	3rd Dec. 1863	Ebenezer Stevens.
Ships' cooking and distilling apparatus - - (*Communicated by Auguste Cardinal, junior.*)	3156	14th Dec. 1863	Richard Archibald Brooman.
COPYING, TRACING, DRAWING AND WRITING.			
Mathematical drawing instruments - -	226	26th Jan. 1863	William Ford Stanley.
Means and apparatus for copying and reproducing sculpture and other objects of art. (*Communicated by François Willème.*)	256	28th Jan. 1863	William Clark.
Improvements in processes for facilitating and combining the art of writing with engraving together on stone, applicable to maps, plans, specifications and other lithography, which improvements are also available for retransfers to zinc or stone, or printing from original.	714	17th March 1863	William Henry Emett.
Reproducing or obtaining fac-similes of the veins, pores, knots and figures of wood, upon paper and other surfaces. (*Communicated by François Magny and Alexandre Cottais.*)	879	7th April 1863	Richard Archibald Brooman.
Improvements in the construction of locks applicable to despatch and other boxes, writing and dressing cases or other similar receptacles.	959	16th April 1863	William Oldfield.
Improvements in indicating the locality of fire, applicable also to denoting the position of ships. (*Telescope and tracer.*)	1055	27th April 1863	William Henry James.
An improved portable copying press	1902	13th May 1863	Frederic Holthausen.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
COPYING, &c.—*continued.*			
Apparatus for ruling paper and other materials, either alone or in combination with typographical or lithographical printing. (*Communicated by Bonaventure Tournier.*)	1320	25th May 1863	William Clark.
An improved ruling and printing machine to be used either combined or separately.	1380	2nd June 1863	Edme Henry Létang.
Improvements in rulers or instruments for ruling, and in the mode of constructing them.	1392	3rd June 1863	Joseph Maurice.
An improved method or process for obtaining patterns and designs for the arts and manufactures. (*Communicated by Thomas James Hussey.*)	1566	22nd June 1863	Francis Boult.
Construction of letter copying presses - -	1743	13th July 1863	Robert Doyne Dwyer.
An improved process for making paper transparent, and transferring designs. (*Drawing or producing designs.*) (*Communicated by Henry Loewenberg and Henry Schoonmaker.*)	1771	15th July 1863	William Clark.
Improved apparatus to facilitate sketching and drawing landscapes, buildings, machinery and other objects, in correct perspective.	1969	10th Aug. 1863	Bernard Heyne the younger.
Hydraulic apparatus - - - - (*Copying presses.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Portable writing cases and despatch boxes -	2613	23rd Oct. 1863	Mary Ann Boyle.
Machinery for ruling or marking leather - -	2717	3rd Nov. 1863	Ralph Eaton.
An apparatus applicable to time, fare, distance and other tables, almanacks, arithmetical calculations, postal and other boxes. (*Applicable to writing cases.*)	2882	18th Nov. 1863	Thomas Christopher Kimpton.
Mode of marking patterns or designs upon gored and straight skirts and skirtings, to serve as a guide for sewing and embroidering thereon.	2972	26th Nov. 1863	John Thorpe.
Improvements in pencil-cases and holders for crayons and other marking, writing or drawing materials, and in boxes for holding leads for pencils, crayons and other articles.	3071	7th Dec. 1863	Michael Turnor.
CORK; CORKS AND BUNGS.			
Improvements in machinery for the cutting of chives, bungs, corks, spiles and vent or other pegs, and also in machinery for manufacturing the knives or cutters employed therein, such machinery being also applicable to the manufacture of trenails and other cylindrical and conical articles	352	7th Feb. 1863	George Redrup.
Improvements in stoppers or bungs for closing or stopping bottles, jars and other vessels and the muzzles of rifles, and for other like purposes. (*Communicated by Ferdinand Krauskopf.*)	1283	22nd May 1863	Charles Maschwitz the younger.
An improved cork cutting machine - - (*Communicated by Edward Borie and Alexander Mackie.*)	1619	29th June 1863	George Davies.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CORK, &c.—*continued.*			
Improvements in apparatus for stopping the bung holes of casks and similar vessels, also in tools or implements for fixing and removing such stopping apparatus.	1878	29th July 1863	Nathan Thompson.
Mode of and apparatus for stopping or closing orifices in casks and other vessels.	2905	19th Nov. 1863	Joseph Collyer.
Improvements in the mode of and apparatus for preparing cork stuffing for mattresses, pillows, cushions and other articles, and in the mode of applying the cork stuffing thereto. (*Communicated by Anton Courlander Crondal.*)	3099	8th Dec. 1863	Alfred Vincent Newton.
CUTTING, SAWING, PLANING.			
I.—Cutting, Sawing, Planing, &c. Metal, Stone, Wood, Cork and Slate.			
Improvements in the construction and mode of working apparatus to be employed in pressing, moulding, shaping, embossing, crushing, shearing and cutting metallic and other substances.	37	5th Jan. 1863	Henry Bessemer.
An improved apparatus applicable to the sawing and cutting of wood or other light substances.	85	10th Jan. 1863	William Grove.
Apparatus for sawing wood and other substances -	86	10th Jan. 1863	William Grove.
Apparatus for holding castings and other pieces whilst being planed or shaped.	122	14th Jan. 1863	John Lawson.
Apparatus for cutting metallic tubes or pipes, or tubes or pipes composed of other indurate substances. (*Communicated by George Henry Sanborn.*)	130	15th Jan. 1863	Thomas Critchley Barraclough.
Machinery for punching and cutting metals - (*Communicated by Nicolas De Telescheff.*)	220	24th Jan. 1863	Marc Antoine François Mennons.
Shaping machines for curvilinear surfaces -	265	29th Jan. 1863	James Mackenzie.
Improvements in machinery for the cutting of chives, bungs, corks, spiles and vent or other pegs, and also in machinery for manufacturing the knives or cutters employed therein, such machinery being also applicable to the manufacture of trenails and other cylindrical and conical articles.	352	7th Feb. 1863	George Redrup.
Machinery for shearing, punching and rivetting metals.	369	11th Feb. 1863	Hugh Donald.
Machinery for tenoning, grooving, sawing and otherwise cutting wood - - - -	384	12th Feb. 1863	Samuel Lumb. John Spink.
Machinery for sawing wood - - -	531	25th Feb. 1863	Nathan Thompson.
Machinery for shaping wood - - -	666	11th March 1863	Henry Wilson.
Machinery for sawing or cutting wood - -	693	14th March 1863	John Walker M'Carter.
Machinery or apparatus for dressing slates -	772	24th March 1863	Henry Williams.
Portable apparatus for working drills and other instruments - - - - - (*For carving.*)	794	26th March 1863	William Tod. Robert Paterson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CUTTING, &c.—*continued.*			
An improved haft or handle for holding tools or instruments of various sizes. (*Joiners' chisels.*)	895	9th April 1863	Francis Joseph Risse.
Improvements in threshing machines, part of which improvements are also applicable for hulling, decorticating, cleaning and polishing grains and seeds. (*Fluting one of the cylinders.*) (*Communicated by Aristide Barbier and Nicolas Edouard Daubrée.*)	1042	25th April 1863	William Edward Newton.
Machinery for cutting the teeth of bevilled wheels -	1172	9th May 1863	James Burrell.
Improved apparatus for cutting slate - -	1193	12th May 1863	George Augustus Huddart.
Apparatus for manufacturing saws suitable for ginning cotton and for other uses. (*Communicated by George Washington Emery.*)	1194	12th May 1863	Horace Leeman Emery.
Machinery for working of wood - - - (*Circular saw-benches, mortising machines.*)	1267	20th May 1863	John Thurgood Markall.
Construction of and mode of working hydrostatic presses and hydraulic apparatus. (*For shearing and cutting.*)	1439	9th June 1863	Henry Bessemer.
Sawing machinery. - - - -	1547	20th June 1863	Robert Brownlee.
Machinery for manufacturing or preparing iron and other metal plates for shipbuilding and other purposes. (*Shearing and planing.*)	1604	25th June 1863	Henry Griffith Craig.
An improved cork cutting machine - - (*Communicated by Edward Borie and Alexander Mackie.*)	1619	29th June 1863	George Davies.
Improvements in boatbuilding and in machinery for shaping wood therefor.	1791	16th July 1863	Nathan Thompson.
Machinery for cutting splints for matches and for collecting the same.	1926	4th Aug. 1863	Edmund Pace.
An improved mode of and apparatus for producing stereotype plates. (*Bevilling the edges.*) (*Communicated by Stephen Davis Tucker.*)	1934	5th Aug. 1863	Alfred Vincent Newton.
An improved equilibrium saw frame - -	1979	11th Aug. 1863	William Blackett Haigh.
Machinery for sawing wood and other fibrous substances.	2064	19th Aug. 1863	Richard Hughes Jackson.
Machinery for planing curved, curvilinear, irregular and other forms in iron, steel and other metals.	2077	21st Aug. 1863	Robert Thompson.
Improvements in shears for cutting metal and other substances.	2140	29th Aug. 1863	Frederick Charles Phillip Hoffmann.
Machinery or apparatus for grinding and polishing metallic articles. (*Saws.*)	2143	29th Aug. 1863	James Dodge.
Improved machinery for sawing irregular forms of wood. (*Communicated by Henry Vrooman.*)	2152	31st Aug. 1863	Alfred Vincent Newton.
Improvements in machinery for mortising, drilling, dovetailing and cutting wood, and in tools to be used for mortising.	2202	7th Sept. 1863	Samuel Gerish. John Weston.
Machinery for planing or cutting off the sides of armour plates.	2264	16th Sept. 1863	Joseph Fox.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CUTTING, &c.—*continued.*			
Improvements in shears for cutting metal threads, wires and rods, applicable also for gauging wires. (*Communicated by Leon Gauches.*)	2323	21st Sept. 1863	Emile Alcan.
Improvements applicable to metallic casks and in machinery for the manufacture of the same.	2498	12th Oct. 1863	Thomas Browning.
Improvements in shears for cutting metals and other substances. (*Communicated by Hugues François Aubert.*)	2501	12th Oct. 1863	William Edward Gedge.
Machinery for cutting railway sleepers to receive railway chairs.	2548	17th Oct. 1863	John Wright.
Steam-engines - - - - - - (*For sawing.*)	2588	21st Oct. 1863	Zerah Colburn.
Machinery or apparatus for punching, shearing and burnishing - - - - - -	2595	22nd Oct. 1863	John Craven. Samson Fox.
An improved machine for punching, shearing and rivetting metals.	2653	27th Oct. 1863	William Livingstone.
Machinery for punching, cutting and pressing metals and other materials.	2657	27th Oct. 1863	Edward Richard Hollands.
Machinery for cutting and boring coal, stone or other minerals - - - - - -	2659	27th Oct. 1863	William Firth. Samuel Firth. John Sturgeon.
Portable hydraulic shearing and rivetting machines	2728	4th Nov. 1863	Joseph Tangye.
Machinery for cutting and planing iron and other metals, particularly applicable to machinery for cutting and planing armour plates - -	2735	5th Nov. 1863	Greenwood Craven. William Craven. John Craven.
Machinery for cutting corks, bungs, gun wads and other similar articles - - - - -	2754	6th Nov. 1863	William Davies. George Cate.
Sawing machines - - - - - -	2782	9th Nov. 1863	William John Cunningham. Herbert Connop.
Endless chain horse powers - - - (*For sawing apparatus.*) (*Communicated by Stuart Perry.*)	2809	11th Nov. 1863	George Haseltine.
Improvements in the construction of dry gas-meters and in the means or apparatus employed therein - - - - - - - (*Cutting diaphragm disc rings.*)	2912	20th Nov. 1863	George Rait. John Winsborrow.
Presses for cutting, perforating and shaping metals	2964	25th Nov. 1863	Thomas Wilson.
Fret saws - - - - - - - (*Communicated by Louis Pierre Nouvel the younger.*)	3059	5th Dec. 1863	Henri Adrien Bonneville.
Improved machinery for manufacturing casks -	3166	15th Dec. 1863	James Davidson.
Construction of machines for cutting and bending wire and simular substances, for coppersmiths, tin plate, iron and zinc sheet workers - -	3214	21st Dec. 1863	Isaac Coombs. John Tomlinson Pendlebury.
Cotton gins - - - - - - - (*Saw tooth.*) (*Communicated by Israel Fanning Brown.*)	3283	29th Dec. 1863	Theodore Bourne.

For Cutting and Rasping Dye Woods, *see* "DYES."
" " Files, *see* "FILES AND RASPS."

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CUTTING, &c.—*continued.*			
XI.—Cutting Paper, India-rubber and Tobacco; Cutting and Splitting Leather and Cloth.			
Looms for weaving - - - - - - (*And cutting pile fabrics.*)	43	6th Jan. 1863	James Eckersley.
Presses for punching or cutting out leather and other substances.	430	17th Feb. 1863	Josiah Gimson.
Machinery or apparatus for the manufacture of carpets and other piled fabrics.	593	3rd March 1863	John Henderson.
Machinery for cutting tobacco into cakes suitable for the press - - - - - - -	1640	1st July 1863	John Harvey. James Samuel Harvey.
A new machine for clipping off connecting threads in the manufacture of lace.	1737	11th July 1863	John Barnes.
Manufacture of hollow cutting tools - - -	1808	20th July 1863	William Simpson. John Hutton.
A new or improved apparatus for lighting and cutting the ends of cigars.	2119	27th Aug. 1863	Charles Richard.
Improvements in cutting or finishing matting and similar fabrics, and in the machinery used therefor.	2265	16th Sept. 1863	Andrew Fleming.
Improvements in shears for cutting metals and other substances. (*Cardboard and leather.*) (*Communicated by Hugues François Aubert.*)	2501	12th Oct. 1863	William Edward Gedge.
Machinery for cutting and finishing the edges of the soles and heels and the bottoms of boots and shoes.	2505	12th Oct. 1863	James John Anderton.
Improvements in self-acting machinery or apparatus worked by steam or other power, for cutting and shaping the soles and heels of boots and shoes and screwing them on to the uppers or coverings, and also in vices for holding the same, and tools for paring, blacking and glazing or otherwise ornamenting the edges of the soles and heels - - - - - - - -	2755	6th Nov. 1863	Charles Henry Southall. Robert Heap.
Machinery or apparatus for cutting strips or threads of india-rubber or other materials.	2985	27th Nov. 1863	James Clark.
For Cutting Roots, &c., *see* "FOOD FOR CATTLE." " " Sugar, *see* "SUGAR." " " Rags for Paper, *see* "PAPER."			
CYLINDERS, ROLLERS, DRUMS; COVERING ROLLERS.			
An improved paste or composition to cover the rollers used by letter-press printers.	198	22nd Jan. 1863	James Martin Binger.
Spools, bobbins, rollers and similar articles -	496	24th Feb. 1863	Henry Masters.
Electro-magnetic telegraphs - - - - -	516	25th Feb. 1863	Henry Wilde.
Manufacture of beaters for thrashing machines -	558	27th Feb. 1863	William Gray.
Improvements in the construction of metal casks and in the machinery employed in the manufacture thereof. (*Communicated by Samuel Jefferson Seely and Edmund Brown Bulkley.*)	644	6th March 1863	William Edward Newton.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CYLINDERS, &c.—*continued.*			
Machinery for washing potatoes and other vegetables	724	18th March 1863	Francis Richmond. Henry Chandler. James Gadsby Richmond.
Core barrels - - - - - - (*For casting cylinders.*)	745	20th March 1863	John Nield. Thomas Arthur Nield.
Machines or apparatus for washing and wringing clothes or fabrics - - - - -	749	20th March 1863	George Coles. James Archibald Jaques. John Americus Fanshawe.
Means or apparatus for stretching fabrics - -	782	25th March 1863	Richard Armitage. Charles Senior.
Engraving upon metals - - - - - (*Communicated by Louis Charles Emile Vial.*)	795	26th March 1863	George Davies.
A new journal axle or bearing particularly applicable to rolls.	808	28th March 1863	Benjamin William Goode.
An improvement or improvements in moulds to be used for casting steel or homogeneous iron. (*Cylinders.*)	818	30th March 1863	Robert Mushet.
Improvements in making moulds for casting and in apparatus connected therewith - - (*Cylindrical articles.*)	846	2nd April 1863	John Warren Law. John Inglis.
Machinery for hammering, rolling and shaping metals. (*Cylindrical articles.*)	924	13th April 1863	John Ramsbottom.
Machinery or apparatus for bending or straightening metal plates.	933	21st April 1863	Hugh Donald.
Improvements in the manufacture of barrels for fire-arms and other descriptions of tubes, and in apparatus or machinery to be employed for that purpose.	1023	24th April 1863	James Thompson.
Improvements in threshing machines, part of which improvements are also applicable for hulling, decorticating, cleaning and polishing grains and seeds. (*Communicated by Aristide Barbier and Nicolas Edouard Daubrée.*)	1042	25th April 1863	William Edward Newton.
Machinery for the manufacture of paper and of the various kinds of boards produced from fibrous substances. (*Communicated by John Franklin Jones.*)	1064	28th April 1863	William Clark.
Improvements in cotton gins and in the method of driving the same, part of which improvements is applicable to other purposes - - -	1079	29th April 1863	Evan Leigh. Frederick Allen Leigh.
Improvements in welding and rolling metals and in machinery connected therewith. (*Communicated by Michel Helson.*)	1091	30th April 1863	Edward Griffith Brewer.
Machinery or apparatus for marking, etching or engraving cylindrical and other surfaces.	1178	11th May 1863	Robert Burgess.
Certain improvements in machinery or apparatus used in the processes or operations of drying, dressing, brushing, waxing and finishing fabrics.	1210	14th May 1863	Thomas Lawrence.
Machinery and apparatus for stretching and drying cotton and other fabrics or materials.	1306	25th May 1863	James Hesford.
Manufacture of ornamental metal cylinders -	1314	25th May 1863	Thomas Spurrier.
Blast engines - - - - - -	1331	27th May 1863	Hiram Craven Coulthard.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CYLINDERS, &c.—*continued.*			
Construction of wrought iron cylinders for piers or piles to bridges, viaducts, or for other foundations or structures where the sinking of cylinders is required.	1332	27th May 1863	Howard John Kennard.
Jacquard machines - - - - (*Communicated by Edouard Maximilien Augustin Rigo and Charles Grognet.*)	1400	5th June 1863	Robert William Sievier.
A new and useful device for turning cross-head wrists or pins, or for turning any cylindrical part of machinery which is secured between two arms. (*Communicated by Walter Scott Phelps.*)	1416	8th June 1863	William Clark.
Certain improvements in machinery for grinding card teeth - - - - - -	1430	9th June 1863	Edward Barlow. James Newhouse. Francis Hamilton. William Hope.
Lubricating apparatus for the cylinders of steam-engines.	1461	11th June 1863	James Johnson.
Machinery for burring, ginning, cleaning and carding cotton and other fibrous substances -	1465	12th June 1863	Francis Alton Calvert. Francis Calvert.
Machinery for stretching and drying fabrics - (*Communicated by Alexandre Fortuné Tulpin.*)	1608	26th June 1863	Alfred Tulpin.
Improvements applicable to the rollers of machines employed for spinning fibrous materials whilst in a wet state.	1765	14th July 1863	James Logan Todd.
Machinery for opening, cleaning and preparing fibrous substances.	1809	20th July 1863	Francis Alton Calvert.
Improvements in and apparatus for dressing or preparing for spinning hemp, flax, manilla-hemp and other like fibrous material.	1833	22nd July 1863	James Ronald.
Engines for obtaining motive-power by steam, air or any other vapour.	1868	27th July 1863	James Whittaker.
Machinery for the manufacture of yarns, threads, laid twine and other cordage - - (*Drawing rollers.*)	1886	30th July 1863	Joseph Thompson Stephens. Charles Hoare.
An improved machine for wringing clothes -	2132	29th Aug. 1863	Henry William Putnam.
Improvements in and applicable to cotton gins -	2133	29th Aug. 1863	George Lowry.
Improvements in apparatus and machinery for the manufacture of metallic tubes and hollow cylinders, part of which improvements may also be applied to the casting of other hollow bodies.	2217	9th Sept. 1863	William Glydon the younger.
Rollers to be used in machinery for spinning and manufacturing wool, cotton and other fibrous materials. (*Communicated by Amos Taylor.*)	2224	9th Sept. 1863	George Tomlinson Bousfield.
An improvement in steam-engines - - (*Communicated by Henry Waterman.*)	2226	9th Sept. 1863	Alfred Vincent Newton.
Manufacture of felted fabrics - - -	2235	10th Sept. 1863	James Heywood Whitehead.
Improvements in brick and tile making machinery, applicable also to machinery for manufacturing other articles from plastic materials - (*Grooved roller.*)	2337	22nd Sept. 1863	John Bond. James Bond.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CYLINDERS, &c.—*continued.*			
Certain improvements in centrifugal machines for treating saccharine substances, part of the same being applicable to other centrifugal machines. (*Communicated by Mr. Charles Hansel.*)	2342	23rd Sept. 1863	Peter Armand Lecomte de Fontainemoreau.
Apparatus for cooling liquids	2438	5th Oct. 1863	John Towlson.
Friction or glazing calenders	2479	9th Oct. 1863	James Mather.
Cotton gins (*Cylinder and teeth.*)	2511	13th Oct. 1863	Thomas Cowell Craven.
Manufacture of copper rollers used for printing calico or other materials	2561	20th Oct. 1863	William Ingham. Isaac Wood.
Machinery, apparatus or means for drying, cleaning and cooling grain and other vegetable products.	2602	22nd Oct. 1863	John Weems.
Machinery for ruling or marking leather	2717	3rd Nov. 1863	Ralph Eaton.
Certain improvements in apparatus for coating or covering the surfaces of rollers or cylinders with leather or other material.	2737	5th Nov. 1863	Edward Kenworthy Dutton.
Certain improvements in machinery for printing cotton and other fabrics.	2751	6th Nov. 1863	Charles Coates.
Apparatus for lubricating the cylinders and other parts of steam-engines.	2769	7th Nov. 1863	James Johnson.
Presses for lithographic and other printing (*Communicated by Jean Theodore Dupuy.*)	2856	14th Nov. 1863	Richard Archibald Brooman.
Improvements in the manufacture of barrels for fire-arms and in machinery to be used in the said manufacture.	2887	18th Nov. 1863	Joseph Rock Cooper.
The application of a certain substance or material for covering rollers used in spinning and preparing cotton, wool and other fibrous substances to be spun.	2914	20th Nov. 1863	Edward Marwood.
Improvements in the manufacture of rollers or cylinders used by calico printers, which improvements are also applicable to other purposes.	3040	3rd Dec. 1863	Thomas Knowles.
Machinery or apparatus for opening, cleaning and preparing cotton and other fibrous materials to be spun.	3056	5th Dec. 1863	James Conlong.
Construction of machinery for ginning cotton	3079	8th Dec. 1863	William Wanklyn.
An invention, firstly, for casting steam cylinders of steam-engines in the form of a segment of a cylindrical ring or circle, and secondly, for the machine for boring them truly cylindrical and retaining the line of the bore on the curve of a true circle. (*Communicated by Samuel Woodruff and Henry B. Beach.*)	3103	9th Dec. 1863	William Henry Cole.
Improved machinery for the treatment of tow and other fibrous substances.	3112	10th Dec. 1863	Morritz Friedlander.
An improved rag machine cylinder or swift and tooth of an improved principle, for the purpose of pulling up woollen and cotton rags, silk rags, hair bagging, and for cleaning and opening wools and waste, and for the pulling up of fibrous substances in the rag	3113	10th Dec. 1863	Alexander Reid. George Rydill.
An improved roller for window blinds	3119	11th Dec. 1863	Susan Tuchet.
Washing machinery (*Communicated by Thomas Mayall.*)	3147	12th Dec. 1863	George Tomlinson Bousfield.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
CYLINDERS, &c.—*continued.*			
Fulling machinery - - - - - (*Communicated by Thomas Mayall.*)	3149	12th Dec. 1863	George Tomlinson Bousfield.
Manufacturing and strengthening of guns, hydraulic press and other cylinders.	3164	15th Dec. 1863	Ludwig Nobel.
Improved apparatus for lubricating the cylinders of steam-engines.	3218	21st Dec. 1863	Robert Heaton Taylor.
Improved means of communication between the guard and engine driver of a railway train. (*Air-pump cylinder.*)	3235	22nd Dec. 1863	Joseph Grindley Rowe.
Manufacture of rollers or cylinders in which a certain degree of elasticity is required - -	3301	30th Dec. 1863	John Platt. William Richardson.
DENTISTRY; ARTIFICIAL TEETH AND PALATES.			
An improved plastic compound for dental purposes, to be used instead of wax, gutta-percha or resinous gums, in taking the impression of the mouth. (*Partly communicated by Edward Billard.*)	379	12th Feb. 1863	Frederick Oppenheim.
Fixing artificial teeth - - - - -	639	6th March 1863	Dennis William Ransom.
Pounded glass powder used for cleaning metals and also for tooth powder.	1795	17th July 1863	Jean Darrieux.
Artificial teeth - - - - - - - - -	2322	21st Sept. 1863	Anne Abbey Downes.
An improved apparatus for moulding and modelling palates, teeth and gums for dental purposes.	2445	6th Oct. 1863	William Batchelour.
DESTROYING INSECTS; TRAPS FOR VERMIN AND BIRDS.			
An improved method of preventing the destruction of plants by insects and certain descriptions of animals, and in the means for effecting the same.	476	21st Feb. 1863	Robert Valentine Dodwell.
raps for catching rats and mice, rabbits and other animals, and birds.	2153	31st Aug. 1863	John Miles.
Means of and apparatus for paralysing, capturing, or killing fish, birds and other animals.	2644	26th Oct. 1863	Isham Baggs.
An improved preparation of tobacco for fumigating purposes.	2662	28th Oct. 1863	Abraham Senior Coronel.
Improvements in composition or means for the purpose of destroying insects by fumigation, and in means or apparatus employed therewith.	2988	27th Nov. 1863	Samuel Smith. Thomas Smith.
Construction of vermin traps - - -	3008	1st Dec. 1863	Richard Brailsford.
An improved preparation for the treatment of flock and other furniture padding to render the same obnoxious to vermin.	3097	8th Dec. 1863	James Tod.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
DISINFECTING, DEODORIZING.			
Improvements in the treatment of organic fecal and urinous matters for the purpose of deodorizing the same, and in the preparation of a portable manure therefrom, and in the treatment of ashes or other refuse of combustion to be combined therewith, also for improvements in machinery to be employed in the manufacture of the said manure.	132	15th Jan. 1863	John Harrop.
Improvements in the application of gas for the preparation of woodwork generally and iron ships, for their better preservation and reception of paint or other protecting coating, and for disinfecting ships, hospitals and other places. (*Communicated by Henri De Lapparent.*)	348	7th Feb. 1863	William Clark.
A new or improved method of purifying the noxious vapours or gases given off from night-soil or other similar substances during the heating, drying or evaporating of such substances - - - - - - -	606	4th March 1863	Thomas Henry Morrell. Joseph Williamson.
Treating fats and fatty oils and volatile oils or essential oils.	817	30th March 1863	Thomas Barnes, Earl of Dundonald.
Treating the waste liquors from bleaching powder stills in order to obtain hydrochloric acid and other products therefrom. (*Used as a deodoriser.*)	967	17th April 1863	Robert Calvert Clapham.
Improvements in treating excrementitious and sewage matters, and in the means or apparatus employed therein.	2208	8th Sept. 1863	Thomas Henry Baker. George Friend.
Privies or closets to be used in place of water-closets.	2218	9th Sept. 1863	Josias Bull York.
Purification and disinfection of hydro-carburets and especially of oils produced by the distillation of coal, schist and boghead. (*Communicated by Jean Eugène D'Arcet.*)	2234	10th Sept. 1863	William Clark.
Preparation of matters to be employed as disinfectants.	2596	22nd Oct. 1863	Alexander Augus Croll.
An improved preparation of tobacco for fumigating purposes. (*Disinfecting rooms, &c.*)	2662	28th Oct. 1863	Abraham Senior Coronel.
Deodorizing petroleum and other mineral oils -	2802	11th Nov. 1863	John Fottrell.
DISTILLING AND RECTIFYING.			
I.—Alcoholic Distillation; Manufacture of Spirituous Liquors.			
Machinery or apparatus used in the process of distillation - - - - - -	285	31st Jan. 1863	John Lightfoot. Frederick Trachsel.
An improved injector or apparatus for feeding boilers with water - - - - (*Or pump for distilleries.*)	304	3rd Feb. 1863	Joseph Fletcher. Henry Bower.
Apparatus to be used in distilling, subliming and drying.	310	4th Feb. 1863	James Mellor.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
DISTILLING, &c.—*continued.*			
Distilling apparatus	346	7th Feb. 1863	William Fyndon Cooper.
An improved method of applying heat in the manufacture and refining of sugar, and in malting, hop drying, brewing, distilling and vinegar making.	584	2nd March 1863	Charles Garton.
Apparatus for indicating any regulated maximum or minimum degree of temperature. (*For stills.*) (*Communicated by Alexander Ross.*)	670	11th March 1863	John Werge.
Improvements in preventing fermentation in alcoholic and other liquids while drawing them from their containing vessels, and in apparatus for the same. (*Communicated by Charles Pierre Laurens, Adolphe Peret and François de Trégomain.*)	839	1st April 1863	William Clark.
Preservation of perishable liquids during the withdrawal or consumption thereof.	844	1st April 1863	Robert Gavin.
An improved method of mashing	1448	11th June 1863	Moritz Hatschek.
Improvements in decorticating grain and seeds, and in the application of the products obtained by and materials used in decorticating. (*Grain for manufacture of alcohol.*) (*Communicated by Jules Lemoine and Louis Joseph Maximilien Chollet.*)	1542	19th June 1863	Michael Henry.
A new method of manufacturing gas alcohol by means of diluted acids acting indefinitely without reconcentration.	1924	4th Aug. 1863	Eugene Alphonse Cotelle.
An improved method of and apparatus for treating molasses, syrups, saccharine juices and other products. (*For manufacture of alcohol.*) (*Communicated by Auguste Pierre Dubrunfaut.*)	2053	18th Aug. 1863	Richard Archibald Brooman.
Apparatus for evaporating and distilling	2106	26th Aug. 1863	Jacques Louis Kessler.
Hydraulic apparatus (*Used in distilling.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Improved means for assisting and regulating the process of fermentation.	2247	12th Sept. 1863	James King.
Brewing or preparing beverages from malt and hops. (*Distilling the malt and hops.*)	2312	19th Sept. 1863	John Carpenter Poolcy.
Mashing apparatus	2336	22nd Sept. 1863	Charles Maitland.
Collecting and saving the spirit or alcohol generated by spontaneous fermentation in raw sugar, concrete melado and molasses, and thrown off during the process of boiling or refining.	2405	1st Oct. 1863	Francis Reid.
Surface condensers for steam and other vapours (*For distilleries.*) (*Communicated by George Wagstaff Yapp.*)	2566	20th Oct. 1863	William Snell.
Apparatus for mashing malt for brewing or distilling	2939	21st Nov. 1863	Douglas William Hamper.
Apparatus for regulating the passage of aëriform and other fluids. (*In stills.*) (*Communicated by Charles Joseph Louis Meynard.*)	3096	8th Dec. 1863	Michael Henry.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
DISTILLING, &c.—*continued.*			
Ships' cooking and distilling apparatus - - (*See* "FILTERING") (*Communicated by Auguste Cardinal, junior*)	3158	14th Dec. 1863	Richard Archibald Brooman.
Apparatus for heating, boiling, evaporating and distilling.	3294	29th Dec. 1863	Jean Michel Vanderfeesten.
For Distilling Water, *see* "FILTERING."			
XI.—Bituminous, Resinous and Oleaginous Distillation.			
Improvements in the treatment of gas produced by the distillation of coal, cannel, bituminous shale, boghead, mineral oils, petroleum or other combustible substances, and for the obtaining of certain products therefrom.	44	6th Jan. 1863	John Leigh.
Improvements in the treatment of petroleum and mineral oils, and in apparatus employed therein.	48	6th Jan. 1863	Edward Vincent Gardner.
Machinery or apparatus used in the process of distillation.	285	31st Jan. 1863	John Lightfoot and Frederick Trachsel.
Apparatus to be used in distilling, subliming and drying.	310	4th Feb. 1863	James Mellor.
Improvements in machinery for digging, compressing and moulding peat or turf, and for retorts or kilns for drying peat or turf and making peat or turf charcoal, through the agency of hydro-caloric or superheated steam, and for collecting the products of distillation whilst charring the peat or turf.	528	25th Feb. 1863	Thomas Vincent Lee.
Improvements in treating petroleum oil and in the combination thereof with other oils for lubricating and other like purposes.	605	4th March 1863	Joseph De Keyser.
Stills for the distillation of petroleum and other heavy oils.	849	2nd April 1863	John Cassell.
Improvements in the extraction of hydro-carburets from minerals, in the distillation thereof, and in apparatus employed therein. (*Communicated by Felix Alexandre Testud de Beauregard.*)	1209	13th May 1863	Richard Archibald Brooman.
Treatment of mineral oils and hydro-carbons - (*Communicated by Louis Martin.*)	1268	21st May 1863	John Cassell.
Manufacture and purification of the metal magnesium.	1278	21st May 1863	Edward Sonstadt.
Distillation of coal tar, tar oil, resin, resin oils, all hydro-carbons, petroleum, or other mineral or vegetable oils and spirits derived therefrom.	1295	23rd May 1863	William Cormack.
Improvements in the distillation and separation of hydro-carburets and their derivatives, and in apparatus for the same. (*Communicated by Jean Théodore Coupier.*)	1405	5th June 1863	William Clark.
Distillation of bituminous substances - - (*Communicated by John Saunders.*)	1433	9th June 1863	Richard Archibald Brooman.
Improvements in treating oil from shale or other bituminous minerals, and similar oils, to obtain various products therefrom, and in apparatus therefor.	1564	22nd June 1863	John M^{c}Lean.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
DISTILLING, &c.—*continued.*			
Apparatus for evaporating and distilling - - (*Petroleum, turpentine, tar, &c.*)	2106	26th Aug. 1863	Jacques Louis Kessler.
Apparatus for distilling shale or other bituminous minerals.	2255	14th Sept. 1863	Thomas Bell.
Improvements in distilling hydro-carbons from coal shale and other bituminous substances, and in apparatus employed for that purpose.	2812	12th Nov. 1863	Andrew Craig.
Improvements in apparatus for the distillation of coal and peat, and such other substances as are or may be used for the manufacture of solid and liquid volatile hydro-carbons, or for the manufacture of the said hydro-carbons and coke.	2886	18th Nov. 1863	William Mattieu Williams.
Improvements of stills or retorts for the distillation of petroleum or tars from coal or shale, or the products thereof.	2899	19th Nov 1863	Anthony Gapper Southby.
Apparatus employed in the manufacture of paraffin and other like oils from shale, cannel and other minerals.	2963	25th Nov. 1863	George Parkin.
Improvements in furnaces and apparatus for the manufacture of volatile hydro-carbons, which improvements are also in part applicable to furnaces and apparatus for the manufacture of illuminating gas.	2981	27th Nov. 1863	Frederic Page.
Distillation or treatment of bituminous substances (*Communicated by John Saunders.*)	3037	2nd Dec. 1863	Richard Archibald Brooman.
Production of hydro-carbon and other oils from gas tar, coal tar, gas, pitch, asphalte, coal and other bituminous substances.	3296	30th Dec. 1863	Thomas Barnes Cochrane, Earl of Dundonald.
See also "GAS."			
DOCKS, HARBOURS, BREAKWATERS, PIERS, LANDING-STAGES, CANALS, SEA-WALLS, SUBMARINE WORKS.			
An improved mode of applying and fastening metal sheathing to the bottoms of iron ships or vessels, and to iron for other uses - - (*To iron for graving docks.*)	602	4th March 1863	Charles Mark Palmer. John Mc Intyre.
Constructing breakwaters, piers, sea-walls and other similar structures.	921	11th April 1863	Price Prichard Baly.
Turn-tables, turn-bridges and slips - -	984	20th April 1863	Ebenezer William Hughes.
Improvements in the construction of piers, walls and other similar structures, and of landing stages, and in the connections therewith or attachments thereto.	1225	15th May 1863	Robert Trefusis Mallet.
Construction of wrought iron cylinders for piers or piles to bridges, viaducts, or for other foundations or structures where the sinking of cylinders is required.	1332	27th May 1863	Howard John Kennard.
Improved fleeting hydrostatic machinery adapted to presses, dry docks, slips or the moving or lifting of heavy masses, parts of which are applicable to the expressing of oil or other fluids.	1591	24th June 1863	Paul Rapsey Hodge.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
Docks, &c.—*continued.*			
Improvements in cranes and in dock gate and other crabs.	1710	9th July 1863	Percy Graham Buchanan Westmacott.
Improvements in breakwaters and in the construction of rail and other ways thereon.	1777	15th July 1863	Dominique Tamet.
Improvements applicable to inland navigation - (*Communicated by Charles Jacques Isaac Troll and François Jacques Mercier.*)	1814	20th July 1863	William Edward Gedge.
A new application of rolled metal plates to the formation of railways, bridges, tramways and other structures. (*Breakwaters, harbours, jetties, &c.*)	1937	6th Aug. 1863	Joseph Emerson Dowson.
Construction of floating docks or apparatus for lifting ships and other bodies.	2060	19th Aug. 1863	Thomas Scott.
Construction of military bridges, piers, landing stages and escalading apparatus.	2096	24th Aug. 1863	Frederick Rice Stack.
Improvements in the construction of floating docks and pontoons, and the means of cleaning, painting or repairing them.	2196	5th Sept. 1863	George Banks Rennie.
Floating docks - - - - -	2512	13th Oct. 1863	Thomas Scott.
Construction of floating docks - - -	2593	22nd Oct. 1863	Robert Baillie.
Preparing cements and varnishes - - (*For marine purposes.*)	2629	24th Oct. 1863	James Brown. John Thomas Way. Thomas Mullett Evans.
Machinery for excavating land, making cuttings and other earthworks. (*For canals.*)	2710	2nd Nov. 1863	Florent Joseph Vandenvinne.
Improvements relating to floating and other docks	2889	18th Nov. 1863	John Elder.
Doors and Gates; Door Furniture.			
Manufacture of elastic fabrics - - - (*Door springs.*)	4	1st Jan. 1863	Matthias Edward Bowra. Arthur Edward Francis.
An improved alarum apparatus which may be employed in connection with locks or other fastenings. (*With door handles.*) (*Communicated by George Henry Sanborn.*)	131	15th Jan. 1863	Thomas Critchley Barraclough.
Improvements in apparatus for casting or moulding articles in glass and in imitation of precious stones or marbles. (*Knobs for doors.*)	184	21st Jan. 1863	Adolphe Boubee.
Improvements in wrought iron casements and in the means for fastening the same, which improvements are also partly applicable to the framework of glass doors, conservatories and similar structures. (*Communicated by Louis Pierre, Vincent Etienne Eugene Jacquemin, Jean Charles Douriez and Gustav Joseph Legros.*)	413	14th Feb. 1863	John Henry Johnson.
Certain improvements in handles for doors, drawers and other means of enclosure.	500	24th Feb. 1863	John Hawthorn.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
DOORS, &c.—*continued.*			
Burglar-proof safes and strong-room doors and frames	594	3rd March 1863	George Price. William Dawes.
Improved apparatus for opening and closing the gates of railway crossings, which apparatus also acts simultaneously upon the signals.	651	9th March 1863	Charles Henry Lea.
Railway carriage doors	799	26th March 1863	Frank Applegate.
Manufacture of knobs and other articles in china and earthenware. (*Door furniture, hat pins, &c.*)	875	7th April 1863	James Macintyre.
Improvements in apparatus for manufacturing beton and artificial stone, pugging clay and other similar purposes, and in the production of artificial stone, and artistic, ornamental and decorative articles, works and surfaces. (*Jambs and styles of doors.*) (*Communicated by François Coignet.*)	1086	29th April 1863	Michael Henry.
Connecting and securing door and other knobs or handles to their spindles.	1219	14th May 1863	Isaac Parker.
Butt hinges (*For doors, gates, &c.*) (*Communicated by William Henry Hayes.*)	1282	22nd May 1863	William Snell,
Posts or pillars for fences and gates (*Communicated by David Middleton.*)	1311	25th May 1863	Edmund Hunt.
Improvements applicable to the ornamentation or decoration of articles of furniture, part of which improvements may also be applied for architectural ornamentation. (*Glass beadings for doors.*)	1471	12th June 1863	Thomas Charles March.
Improvements in metal screens and sieves for screening and sifting, applicable also to other openwork articles. (*Applicable to gates.*)	1540	19th June 1863	William Hicklin.
Improvements in stoppers and lids or covers for jars, bottles and other vessels, also in closing and fastening other articles (*Fastening doors.*)	1625	30th June 1863	Josiah George Jennings. Manuel Leopold Jonas Lavater.
Improvements in fencing land and in hanging gates	1651	2nd July 1863	John King.
Improvements in instruments or apparatus to be used in the manufacture of glass finger plates and other articles made of glass, and in kilns for annealing articles made of glass.	1684	7th July 1863	Eliezer Edwards.
Spring hinges for swing doors	1689	7th July 1863	Samuel Robinson.
Safely closing doors, windows and other apertures (*Communicated by Leon Mariz and Jacques Fumet.*)	2002	13th Aug. 1863	Charles Tessier.
Bolts for fastening doors, windows, shutters and for other like purposes.	2173	3rd Sept. 1863	Charles Jackson.
Improvements in the manufacture and construction of fences, part of which are also applicable to the manufacture and construction of gate posts, and to poles and posts used for telegraph and signal purposes, and for stretching telegraph wires.	2192	5th Sept. 1863	Joseph Rowell.
A new system of fastening for doors, windows, safes, chests and other similar purposes	2742	5th Nov. 1863	Henry Hancock. William Henry Vickers, junior.
An improved mode of attaching door knobs to their spindles	2862	16th Nov. 1863	Josiah Hulse. Joseph Lawrence.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
Doors, &c.—*continued.*			
An improved apparatus for closing and fastening gates, doors and things of that description.	2934	21st Nov. 1863	Ludovic D'Estienne de Saint Jean.
Mode of connecting and sustaining the intersecting bars of iron fences, hurdles, gates and other analogous structures.	2978	27th Nov. 1863	James Andrew Ramsay Main.
Improvements in the manufacture of door springs, part of which said improvements are applicable to the manufacture of weighing machines, steel-yards, scale beams and other articles of like nature - - - - -	2996	30th Nov. 1863	George Apdail Thompson the elder. George Apdail Thompson the younger. John Latham.
Fitting moveable or travelling frames and surfaces - (*Door frames.*)	3025	2nd Dec. 1863	John Dales.
Fastenings for doors - - - -	3109	9th Dec. 1863	Mark Hillary.
An improved sash or shutter fastener, also applicable to doors and casements.	3117	10th Dec. 1863	Richard William Pyne.
Drains, Sewers, Gutters; Drain Pipes and Tiles; Draining; Stench Traps.			
Improvements in obtaining reciprocating motion in steam-engines, and for communicating the same to any ordinary pumps for whatever purpose they may be employed. (*Draining wells.*)	166	20th Jan. 1863	Alfred Paul.
Improvements in syphons applied to draining, irrigation and other purposes, whereby they self-suspend and resume action according to requirements. (*Communicated by François Triballat.*)	221	24th Jan. 1863	William Clark.
Apparatus for raising sewage and water - -	470	20th Feb. 1863	William Husband. Joseph Quick.
Machinery or apparatus for manufacturing bricks, tiles, pipes and mouldings. (*Drain pipes.*)	647	9th March 1863	James Cowley.
Agricultural apparatus - - - - (*For trenching or draining.*) (*Communicated by Jean Baptiste Décours, Athanase Charles Le Lavandier and Pierre Edouard Lambert.*)	767	23rd March 1863	William Clark.
Construction and arrangement of the rain-water pipes for buildings.	804	27th March 1863	John Taylor, junior.
Improvements in drainage and in water-closets, and in the means and apparatus necessary for the same respectively.	1096	1st May 1863	Edward Jones.
Tiles for drainage or sanatory purposes - -	1177	11th May 1863	Benjamin Hargreaves.
Improvements in the preparation or treatment of peat or turf, and the manufacture thereof into charcoal and other fuel, drain pipes, building and other tiles, and in apparatus used therein.	1255	19th May 1863	John Kelly.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
DRAINS, &c.—*continued.*			
Using Apo-elastikon hyphrasma as a new and improved cloth for floors, roofs, walls, tanks and other linings, being impervious to damp and of great strength and durability. (*For gutters.*)	1603	25th June 1863	William Kirrage.
An improved self-acting "flushing" apparatus (*For sewers.*) (*Communicated by Louis Melotte.*)	1880	29th July 1863	Henri Adrien Bonneville.
Self-acting valves and traps for sewers	1940	6th Aug. 1863	John Tenwick.
Fans, pumps and machinery for propelling air, fluids or other substances by centrifugal force. (*Conveying water from mines.*)	2008	14th Aug. 1863	Christian Schiele.
Improvements in brick and tile making machinery, applicable also to machinery for manufacturing other articles from plastic materials. (*Drain tiles.*)	2337	22nd Sept. 1863	John Bond. James Bond.
Improvements in taps, cocks, hydrants or valves and apparatus connected therewith, for opening, closing, regulating and facilitating and otherwise controlling the passage or flow of water, air, steam, gas and other fluids and liquids. (*For flushing sewers.*)	2432	5th Oct. 1863	Charles Tomlison.
Apparatus to be used for pumping water out of mines and other places.	2448	7th Oct. 1863	Edward Jones.
Manufacture of bricks, drain pipes, traps, sewage tanks, and water-closet pans and valves, and the machinery and apparatus necessary for the same.	2708	31st Oct. 1863	Edward Jones.
Construction of syphons for taking off liquid sewerage, overflow of rivers and other like purposes.	2849	14th Nov. 1863	George Barker.
Stink traps for water-closets, sinks and other purposes.	2973	26th Nov. 1863	James Simmonds.
DRYING AND STRETCHING; EXPRESSING MOISTURE.			
Improvements in the treatment of organic fecal and urinous matters for the purpose of deodorizing the same, and in the preparation of a portable manure therefrom, and in the treatment of ashes or other refuse of combustion to be combined therewith, also for improvements in machinery to be employed in the manufacture of the said manure.	132	15th Jan. 1863	John Harrop.
Improvements in desiccating and in preserving matters from decay. (*Communicated by Jean Baptiste Pierre Camille Bergouknioux.*)	186	21st Jan. 1863	William Clark.
Machinery for drying yarns or threads	200	22nd Jan. 1863	William Blackwood. John Blackwood.
Heating arrangements of stoves for drying woven fabrics.	244	28th Jan. 1863	Horatio Watson.
Apparatus to be used in distilling, subliming and drying.	310	4th Feb. 1863	James Mellor

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
DRYING, &c.—*continued.*			
Improvements in press papers and in the method or means of drying them and other similar sheets of paper, applicable also for the drying of woven fabrics, yarns, wool, cotton or other fibrous substances.	415	16th Feb. 1863	James William Crossley.
Preparation of cotton seed cake - - -	456	19th Feb. 1863	Jean Joseph Badart.
Improvements in machinery for digging, compressing and moulding peat or turf, and for retorts and kilns for drying peat or turf, and making peat or turf charcoal through the agency of hydrocaloric or super-heated steam, and for collecting the products of distillation whilst charring the peat or turf.	528	25th Feb. 1863	Thomas Vincent Lee.
A new or improved method of purifying the noxious vapours or gases given off from night-soil or other similar substances during the heating, drying or evaporating of such substances - - - - - -	606	4th March 1863	Thomas Henry Morrell. Joseph Williamson.
Improvements in treating seaweed and in apparatus therefor.	607	4th March 1863	Edward Alfred Wünsch.
Apparatus for indicating any regulated maximum or minimum degree of temperature. (*For drying rooms.*) (*Communicated by Alexander Ross.*)	670	11th March 1863	John Werge.
Machinery or apparatus for washing or cleansing and drying Egyptian wheat, beans, and other kinds of grain or seeds.	699	14th March 1863	James Walworth.
Cleansing and treating certain descriptions of wheat and other grain.	727	18th March 1863	Benjamin Wren.
Machinery for drying and cooling grain and seeds - (*Communicated by Jesse Brown Wheeler and Simeon Losee.*)	737	19th March 1863	Henry Osburne Haughton.
Machinery for beating and drying wool and other textile and filamentous substances. (*Communicated by Louis César Carlier Vitu.*)	746	20th March 1863	Richard Archibald Brooman.
Means or apparatus for stretching fabrics -	782	25th March 1863	Richard Armitage. Charles Senior.
Improved machinery or apparatus for drying coal, grain and other substances.	857	4th April 1863	Prosper Hanrez.
Machinery or apparatus for drying grain, applicable also to the manufacture of malt. (*Communicated by George Henry Fourdrinier.*)	876	7th April 1863	John Henry Johnson.
Improvements in machinery for washing and drying wool and other fibres and rags, also in tentering, stretching and drying fabrics.	890	8th April 1863	James Lee Norton.
Apparatus for drying animal, vegetable and mineral substances.	973	18th April 1863	William Stevenson Macdonald.
Improvements in drying and cooling grain, and in the machinery or apparatus employed therein. (*Communicated by William Henry Sutton and James John Gibson.*)	1066	28th April 1863	John Henry Johnson.
An improved dryer fabric for paper making -	1167	9th May 1863	William Boaler.
Machinery for preparing, dressing and winding cotton, woollen, flax, silk and other warps. (*Communicated by Pierre François Dacheux and Gustave Lefebre.*)	1197	12th May 1863	Richard Archibald Brooman.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
DRYING, &c.—*continued.*			
Improvements in calendering, embossing and other such machines used for finishing woven fabrics, part of which improvements is also applicable to drying machines.	1208	13th May 1863	James Farmer.
Certain improvements in machinery or apparatus used in the processes or operations of drying, dressing, brushing, waxing and finishing fabrics.	1210	14th May 1863	Thomas Lawrence.
Rotary engines - - - - - - (*Hydro-extractors.*) (*Communicated by Adrien Jules Alexis Dumoulin.*)	1233	16th May 1863	William Clark.
Improvements in treating flax and other fibrous plants in order to prepare the fibres thereof for spinning, and in apparatus employed therein.	1254	19th May 1863	Henry John Olding.
Improvements in the preparation or treatment of peat or turf, and the manufacture thereof into charcoal and other fuel, drain pipes, building and other tiles, and in apparatus used therein.	1255	19th May 1863	John Kelly.
Machinery and apparatus for stretching and drying cotton and other fabrics or materials - -	1306	25th May 1863	James Hesford.
Means for drying grain - - - - -	1367	1st June 1863	Lewis Scudder Chichester.
Treatment of peat and other substances containing moisture.	1410	8th June 1863	Charles Edward Newcomen.
Apparatus for drying and airing clothes - -	1412	8th June 1863	Nicholas Walton.
Obtaining certain products from hops - -	1428	9th June 1863	George Hills.
Machinery for stretching and drying fabrics - (*Communicated by Alexandre Fortuné Tulpin.*)	1608	26th June 1863	Alfred Tulpin.
An improved mode of and apparatus for treating or preparing megass and other substances to be used as fuel.	1659	3rd July 1863	Hamilton Shirley Warner.
Machinery or apparatus for sizing and drying yarns and fabrics - - - - -	1810	20th July 1863	Robert Benjamin Brassey. James Hargreaves.
An improved mode of and apparatus for drying chemical compounds and other substances.	1992	12th Aug. 1863	Robert Stirling Newall.
Certain improvements in machinery or apparatus for preparing and drying clay, and also in machinery to be employed in the manufacture of bricks and tiles.	2166	2nd Sept. 1863	Joseph Lewis.
Improvements in printing on certain and other terry and velvet pile carpets, felted cloths and other fabrics and materials, and in the processes and apparatus connected therewith.	2207	8th Sept. 1863	Joseph Burch.
Improvements in granulating and drying gunpowder, and in apparatus to be used therefor.	2230	10th Sept. 1863	Thomas Brown Jordan.
An improved method of preparing the fibres of hemp, flax, and other vegetable materials for manufacturing purposes.	2258	14th Sept. 1863	George Whitfield Billings.
Drying or curing certain vegetable productions -	2259	14th Sept. 1863	William Gossage.
An improved method of and apparatus for consuming smoke and heating and warming public and other buildings, and for drying purposes generally.	2266	16th Sept. 1863	Gabriel Lewal.
Improvements in drying paper, pasteboard and similar fabrics, and in the machinery, apparatus or means employed therein.	2287	17th Sept. 1863	Peter McLaurin.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
DRYING, &c.—*continued.*			
Machinery for stretching woven fabrics - -	2333	22nd Sept. 1863	Joseph Renshaw. John Haworth.
Certain improvements in centrifugal machines for treating saccharine substances, part of the same being applicable to other centrifugal machines. (*Communicated by Mr. Charles Hänsel.*)	2342	23rd Sept. 1863	Peter Armand Le Comte de Fontaine Moreau.
Buildings used for drying bricks, tiles and other articles.	2526	15th Oct. 1863	Henry Clayton.
Surface condensers for steam and other vapours - (*Applicable for drying.*) (*Communicated by George Wagstaff Yapp.*)	2566	20th Oct. 1863	William Snell.
Machinery, apparatus or means for drying, cleaning and cooling grain and other vegetable products.	2602	22nd Oct. 1863	John Weems.
Machinery or apparatus for making bricks and tiles, applicable also for washing and drying clay - - - - - - -	2668	28th Oct. 1863	James Cavanah. John Cavanah.
Apparatus for feeding sheets of sized or unsized paper to a drying machine.	2694	30th Oct. 1863	George Frederick Busbridge.
Manufacture of nitrate of potash - - -	2758	6th Nov. 1863	Joseph Townsend.
Apparatus for drying plates and other articles of china and earthenware.	2761	6th Nov. 1863	Colin Minton Campbell.
Improvements in washing textile fabrics and in the machinery or apparatus employed therein. (*And drying.*) (*Communicated by Madame Rosine Saiglan Bagnères.*)	3062	5th Dec. 1863	John Henry Johnson.
Apparatus for regulating the passage of aëriform and other fluids. (*In drying chambers.*) (*Communicated by Charles Joseph Louis Meynard.*)	3096	8th Dec. 1863	Michael Henry.
Centrifugal machines for extracting the syrups from sugar.	3123	11th Dec. 1863	John Corby.
Improvements in malt and hop kilns, which improvements are partly applicable to the ventilation and warming of buildings, and to the drying of various substances.	3124	11th Dec. 1863	Alexander Epps.
Improvements in sizing or dressing and in drying fibrous materials or fabrics, and in apparatus therefor.	3137	12th Dec. 1863	Joseph Townsend.
Manufacture of caustic soda and caustic potash -	3232	22nd Dec. 1863	James Shanks.
Improvements in the arrangement of furnaces, flues and kilns for drying and burning bricks, tiles and other articles, and in the application of the heat from the kilns to boilers for generating steam.	3266	24th Dec. 1863	James Duckett.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
DYEING TEXTILE FABRICS, YARNS AND MATERIALS; FIXING COLOURS; MORDANTS.			
Apparatus to be used in turkey-red dyeing -	133	15th Jan. 1863	George Graham. John McLeod.
Printing and dyeing textile fabrics and yarns -	151	17th Jan. 1863	John Lightfoot.
Improvements in obtaining colouring matters, part of which improvements is also applicable to dyeing and printing - - - - -	192	21st Jan. 1863	Heinrich Caro. John Dale.
Certain improvements in the mode of fixing colouring matter on cotton, silk, wool and other fibres and materials, and certain improvements in finishing such like and other textile fabrics and yarns - - - - - - -	219	24th Jan. 1863	Edward Booth. George Booth. Andrew Swallow.
An improved injector or apparatus for feeding boilers with water. (*Or pump for dye houses.*)	304	3rd Feb. 1863	Joseph Fletcher. Henry Bower.
An improved apparatus for and means of dyeing wool in the sliver, from which mixture yarns may be drawn.	327	5th Feb. 1863	Edward Ingham.
Certain improvements in the process and method of dyeing yarns.	344	7th Feb. 1863	James Mallison junior.
Apparatus and processes for steeping, boiling, washing, bleaching and dyeing fibrous materials or slivers, slubbings, rovings, yarns or woven fabrics of the same - - - - - -	387	10th Feb. 1863	William Whitaker. William Tongue.
Ornamenting plush and other such textile fabrics (*See* "PRINTING.")	493	23rd Feb. 1863	Thomas Dickins. Albert Lungley Dickins. Harvey Heywood.
Printing and dyeing cotton and other fabrics -	517	25th Feb. 1863	Frederick Albert Gatty.
Printing and dyeing woollen fabrics - -	686	13th March 1863	Albert Wydler. Christopher Thornton.
Preparation of colouring matters for dyeing and printing. (*Communicated by Robert Hodgson Gratrix.*)	700	14th March 1863	William Boaler.
Improvements in bleaching and in reducing and brightening the colour or tone of dyed straw plaits and straw - - - - -	733	18th March 1863	John Davis Welch. Alfred Phippen Welch.
Improved compounds or compositions for sizing, stiffening and colouring yarns and textile fabrics.	893	9th April 1863	David James Cooke.
Hardening and colouring gypseous limestone and sand and calcareous stones. (*Communicated by Pascal Nicolas Balthazar Fioravanti.*)	940	14th April 1863	Richard Archibald Brooman.
Improvements in dyeing and staining fabrics, parts of which improvements are also applicable for dyeing, staining and ornamenting glass and other substances.	1057	27th April 1863	Alexander Rollason.
Dyeing knickerbocker yarns and textile fabrics manufactured of or from such yarns.	1166	9th May 1863	John Brierley.
Machinery for weaving, sizing, dressing and dyeing - - - - - - -	1201	13th May 1863	Thomas Parkinson. Francis Taylor.
Preparation of aniline dyes or colouring matters for dyeing, staining or printing textile substances.	1458	11th June 1863	Jules Albert Schlumberger.
Fixing mordants in the processes of dyeing and printing textile fabrics or yarns.	1505	16th June 1863	John Lightfoot.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
DYEING, &c.—*continued.*			
Dyeing and printing - - - - (*Communicated by Nicholas Rave, ainé.*)	1748	13th July 1863	James Laing.
Dyeing mixed animal and vegetable fibres whether in a raw or manufactured state. (*Communicated by Theophile Grison.*)	1902	1st Aug. 1863	Richard Archibald Brooman.
Dyeing and printing - - - -	1936	6th Aug. 1863	Charles Lowe.
Improvements relating to baths or boilers used in dyeing.	1986	12th Aug. 1863	George Graham.
Preserving the colours of dyed fabrics - -	2069	20th Aug. 1863	James Fleming.
Dyeing cotton or other vegetable fibrous substances	2388	29th Sept. 1863	Henry Haigh. Richard Heaton.
An improved compound reactive agent and universal mordant to be employed in the processes of dyeing and printing. (*Communicated by Antonio Bozzi.*)	2416	2nd Oct. 1863	John Garrett Tongue.
Printing or dyeing textile fabrics - - -	2489	10th Oct. 1863	Duncan Proudfoot.
Dyeing threads of silk - - - -	2609	22nd Oct. 1863	Thomas Dickins. Albert Lungley Dickins. Harvey Heywood.
Improvements in apparatus used in dressing lace and other textile fabrics, and suitable also to the application of dyes or colouring matters thereto.	2628	24th Oct. 1863	Francis Bryan Baker.
Process or processes of producing aniline black on cotton fabrics or yarns. (*Communicated by Honoré Cordillot.*)	3045	4th Dec. 1863	Edward Joseph Hughes.
Apparatus for regulating the passage of aëriform and other fluids. (*In dyeing vats.*) (*Communicated by Charles Joseph Louis Meynard.*)	3096	8th Dec. 1863	Michael Henry.
Machinery for grounding or colouring wall paper and other fabrics. (*Communicated by Richard M'Namee.*)	3133	11th Dec. 1863	Richard Archibald Brooman.
Treating printed and dyed fabrics - -	3259	24th Dec. 1863	Nathaniel Lloyd. Edwin Hargraves.
See also "DYES."			
DYES AND PRINTING-COLOURS.			
Manufacture of dyes from aniline and its analogues (*Communicated by Georges Auguste Jules Delvaux.*)	70	8th Jan. 1863	Robert Thomson Monteith. Robert Monteith.
Manufacturing "magenta" colour or dye - -	92	12th Jan. 1863	Dan Dawson.
Preparation of green coloring matter - - (*Communicated by Charles Jules Usèbe.*)	97	12th Jan. 1863	William Clark.
An improved process for manufacturing colours for dyeing and printing. (*Communicated by Jean Jaques Muller.*)	117	14th Jan. 1863	Jules Albert Schlumberger.
Manufacture of colouring matters - - -	138	15th Jan. 1863	Charles Hanson Greville Williams.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
DYES, &c.—*continued.*			
Improvements in obtaining colouring matters, part of which improvements is also applicable to dyeing and printing - - - -	192	21st Jan. 1863	Heinrich Caro. John Dale.
Manufacture of red colouring matters - -	271	29th Jan. 1863	Charles Hanson Greville Williams.
Treatment of colouring matters derived from tar for the purpose of making them applicable for painting. (*Communicated by Barthelemy Dupuy and Antoine Vibert.*)	475	21st Feb. 1863	Edward Thomas Hughes.
Production and manufacture of blue colors - (*Communicated by Augustus Eisenlohr.*)	541	26th Feb. 1863	Astley Paston Price.
Making dyes from aniline and its analogues - (*Communicated by Georges Auguste Jules Delvaux.*)	660	11th March 1863	Robert Thomson Monteith. Robert Monteith.
Printing and dyeing woollen fabrics - -	686	13th March 1863	Albert Wydler. Christopher Thornton.
Preparation of coloring matters for dyeing and printing. (*See* "DYEING.") (*Communicated by Robert Hodgson Gratrix.*)	700	14th March 1863	William Boaler.
Manufacture of brown coloring matters - - (*Partly communicated by Charles Girard.*)	717	17th March 1863	Georges De Laire.
Improvements in the manufacture of aniline, napthylamine and other analogous bodies, and in apparatus connected therewith, which apparatus is also applicable to obtaining finely divided metallic iron for other purposes -	815	28th March 1863	John Dale. Gustav Bischof, junior.
An improved process for producing yellow coloring matters and other color which may be derived therefrom. (*Communicated by David Clovis Knab.*)	821	30th March 1863	William Edward Newton.
Manufacture of red and orange coloring matters -	859	4th April 1863	William Henry Perkin.
Manufacture of blue colouring matter and also of violet colouring matter. (*Communicated by Friedrich Beyer.*)	1021	24th April 1863	Philip Passavant.
Manufacture of blue and violet coloring matters suitable for dyeing and printing - -	1036	25th April 1863	Alcide Poirrier. Charles Chappat.
An improved blue colouring matter - -	1148	7th May 1863	Thomas Holliday.
Manufacture of coloring matters - - -	1173	9th May 1863	Charles Hanson Greville Williams.
Preparing coloring matters for dyeing and printing.	1291	22nd May 1863	Augustus William Hofmann, F.R.S.
Means or method of producing black coloring matters or pigments. (*See* "PAINTING.")	1354	29th May 1863	William Green.
An improvement in the manufacture of scarlet, brown and orange colors.	1396	4th June 1863	Heinrich Pollack.
Improvements in the distillation and separation of hydro-carburets and their derivatives, and in apparatus for the same. (*Communicated by Jean Théodore Coupier.*)	1405	5th June 1863	William Clark.
Preparation of aniline dyes or colouring matters for dyeing, staining or printing textile substances. (*See* "DYEING.")	1458	11th June 1863	Jules Albert Schlumberger.
Manufacture of red colouring matter - -	1713	9th July 1863	William Virgo Wilson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
DYES, &c.—*continued.*			
An improved mill for grinding bones, grain, logwood and such like substances.	1883	30th July 1863	George Inskeep.
Production of yellow and orange coloring matters -	1952	7th Aug. 1863	John William Slater.
An improved manufacture of blue and of violet colouring matter. (*Communicated by Meister Lucius and Company.*)	1972	10th Aug. 1863	Alfred Vincent Newton.
Manufacture of certain colouring matters known as Prussian blue, Berlin blue, Paris blue, China blue, and Turnbull's blue.	2067	20th Aug. 1863	Samuel Hallsworth. Thomas Platt.
Machinery, apparatus or means for drying, cleaning and cooling grain and other vegetable products. (*Cochineal.*)	2602	22nd Oct. 1863	John Weems.
Preparing or obtaining coloring matters - -	2739	5th Nov. 1863	Richard Smith.
Manufacture of coloring matters suitable for dyeing and printing.	2762	6th Nov. 1863	William Henry Perkin.
Production of colours for dyeing - - -	2803	11th Nov. 1863	Dan Dawson.
Manufacture of coloring matters suitable for dyeing and printing.	2892	18th Nov. 1863	Edward Chambers Nicholson.
Manufacture of coloring matters suitable for dyeing and printing.	2894	18th Nov. 1863	Heinrich Hirzel.
Production and manufacture of certain yellow and orange colors. (*Communicated by Eugen Lucius.*)	3063	5th Dec. 1863	James Alfred Wanklyn.
Production of aniline colours - - - - -	3302	30th Dec. 1863	George Phillips.
Obtaining colouring matters for dyeing and printing - - - - - - -	3307	31st Dec. 1863	John Dale. Heinrich Caro.
EARTHENWARE AND PORCELAIN; POTTERY KILNS; POTTERS' GLAZES; CERAMIC WARES.			
Ovens or kilns for firing, burning or baking pottery, bricks, tiles and other earthen or ceramic articles.	471	21st Feb. 1863	Charles Malpas.
Improvements in dressing millstones, in ornamenting or engraving on glass, pottery and other similar substances, and in materials employed therein. (*Communicated by Cyprien Marie Tessié du Motay and Charles Raphael Maréchal.*)	488	23rd Feb. 1863	Richard Archibald Brooman.
Improvements in preparing and obtaining photographic impressions, and in the application of such impressions. (*Applied on porcelain.*) (*Communicated by Alphonse Louis Poitevin.*)	586	2nd March 1863	William Clark.
Improvements in furnaces or fire-places, and in apparatus to be used in connection therewith. (*For pottery kilns.*) (*Communicated by Louis Herbert.*)	796	26th March 1863	John Henry Johnson.
Manufacture of knobs and other articles in china and earthenware.	875	7th April 1863	James Macintyre.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
EARTHENWARE, &c.—*continued.*			
Moulding articles of china or other clay or of other plastic materials.	1000	22nd April 1863	François Durand.
Glass and other furnaces or kilns - - - (*Pottery kilns.*)	1189	12th May 1863	Thomas Warren.
Manufacture of bricks, quarries, slabs, tiles, earthenware pipes, and other earthenware or ceramic articles.	1492	15th June 1863	John Forrester.
Ornamenting porcelain - - - -	1594	24th June 1863	James Leigh Hughes.
Machinery or apparatus for moulding or shaping pottery ware. (*Communicated by Robert Marcher.*)	1627	30th June 1863	John Henry Johnson.
Certain compositions for protecting metals and metallic articles from oxidation, and for coating slate, bricks, pottery and ceramic wares. (*Communicated by Camille Baroness de Lavenant.*)	1646	2nd July 1863	Richard Archibald Brooman.
Means of and apparatus for heating, melting, boiling, evaporating and other useful purposes. (*Annealing porcelain.*)	1824	21st July 1863	Charles Stewart Duncan.
Improvements in printing in colours pictures or devices to be used in ornamenting porcelain, stoneware, earthenware, or any other substances where the colors can be annealed or melted or burnt in.	2146	31st Aug. 1863	Henry Edward Kramer.
Improvements in the manufacture of iron and other metals, and in the apparatus employed therein, parts of which are applicable for other purposes where high temperatures are employed, and also for ventilation. (*And for manufacture of porcelain.*)	2425	3rd Oct. 1863	Edward Brown Wilson.
Improved apparatus to be used in placing "glost china" and earthenware in ovens and kilns for firing, burning or baking such ware.	2450	7th Oct. 1863	Elias Leak.
Apparatus for drying plates and other articles of china and earthenware.	2761	6th Nov. 1863	Colin Minton Campbell.
Apparatus for transmitting motive-power - - (*To potters' wheels.*)	3129	11th Dec. 1863	John Cliff.
ELECTRICITY, GALVANISM AND MAGNETISM, AND THEIR APPLICATION.			
An improved method of firing or discharging cannon and other fire-arms, a part of which invention is applicable generally to the firing of charges of powder. (*Communicated by George Washington Beardslee and Frederick Edwards Beardslee.*)	30	3rd Jan. 1863	William Edward Newton.
Warping or beaming machines - - -	34	5th Jan. 1863	John Howard. John Bullough.
A new or improved instrument or apparatus to be attached to pianofortes, organs and other similar keyed musical instruments, for printing the score of any music performed on the said instruments.	101	13th Jan. 1863	Joseph Beverley Fenby.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
ELECTRICITY, &c.—*continued.*			
Improvements in the means of communicating signals on board ship and of indicating the position of the rudder.	210	23rd Jan. 1863	Frederic Newton Gisborne.
Improvements in preserving provisions and in the apparatus employed for such purpose. (*Communicated by Alfred Henry Rémond.*)	233	27th Jan. 1863	George Davies.
An improved mode of producing the aura electric gas.	287	31st Jan. 1863	John Grossmith.
Improvements in indicating the positions or conditions of railway signals and points, and in the apparatus employed therein.	396	13th Feb. 1863	Samuel Whitaker.
Means for rendering ships' and other compasses insensible to local attraction.	401	14th Feb. 1863	John Sacheverell Gisborne. William Simpson.
An improved method of preventing the destruction of plants by insects and certain descriptions of animals, and in the means for effecting the same.	476	21st Feb. 1863	Robert Valentine Dodwell.
Improvements in preserving provisions and in the apparatus employed for such purpose.	477	21st Feb. 1863	Alfred Henry Rémond.
Improvements in veneering or overlaying woods according to two methods, 1st, by means of steam exhaustion or steam pressure, or air exhaustion or air pressure, 2dly, by the employment of electro-magnetism.	533	25th Feb. 1863	Alexander Macivor.
Apparatus for detecting and detaining thieves and indicating the presence of fire.	613	4th March 1863	James Craig.
Machinery for engraving by means of electricity -	633	6th March 1863	Michel Jourdin.
Improved machinery for obtaining and applying motive-power.	653	9th March 1863	Pierre Hugon.
Voltaic belts and bandages - - - (*Communicated by Florent Babin.*)	662	11th March 1863	Richard Archibald Brooman.
Apparatus for indicating any regulated maximum or minimum degree of temperature. (*Communicated by Alexander Ross.*)	670	11th March 1863	John Werge.
Improvements in mariners' compasses and the parts in connection therewith, and in the application thereof to magnetic instruments.	695	14th March 1863	Robert Alexander.
Engraving upon metals. (*Communicated by Louis Charles Emile Vial.*)	795	26th March 1863	George Davies.
An instrument or holder for holding nails, screws or other fastenings.	1155	8th May 1863	Justus Charles Droop.
Improvements in indicating the position of trains upon railways, and in apparatus employed therein. (*Communicated by Albert Mayrhofer, Adolf Stepski and Martin Crachi.*)	1301	23rd May 1863	Richard Archibald Brooman.
An electric tell-tale compass - - -	1553	20th June 1863	Fleeming Jenkin.
Apparatus for actuating domestic bells and other signals by the electric current.	1596	24th June 1863	Andrew Edmund Brae.
Improvements in the construction and arrangement of galvanic batteries, and in the utilization of products resulting therefrom.	1732	10th July 1863	Ludwig Stille.
Railway signals - - - - -	1733	11th July 1863	Edwin Daniel Chattaway.
A self-acting electro-magnetic clock-work signal for railway purposes.	1767	15th July 1863	Edward Funnell.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
ELECTRICITY, &c.—*continued.*			
Electro-motive engines	1931	5th Aug. 1863	William Storer. John Hancock.
Improved means of conducting electric currents through railway trains, and of actuating signals or alarums therein.	2007	14th Aug. 1863	Andrew Edmund Brae.
Air and gas engines (*Communicated by Auguste Nicol Otto.*)	2098	24th Aug. 1863	Richard Archibald Brooman.
Improvements in the generation and production of motive-power to be applied generally, and in its special application to the propulsion of vessels	2191	5th Sept. 1863	Thomas Moody. Edward Toms Moody.
Apparatus applied to railway carriages and trains in order to obtain greater safety to passengers.	2285	17th Sept. 1863	John Gottlieb Ulrich.
Improvements in the manufacture of iron and steel, and in apparatus to be employed in such manufacture. (*Communicated by William Gerhardt.*)	2293	18th Sept. 1863	George Davies.
Means of protecting and preserving the hulls and bottoms of ships and vessels from fouling and corrosion.	2295	18th Sept. 1863	Isham Baggs.
Apparatus for giving a reciprocating motion to picks and cutting tools used in getting coal and other minerals and stone	2327	21st Sept. 1863	Robert Ridley. James Grafton Jones.
An improved fabric for the production of permanent electricity applicable for wearing-apparel. (*Communicated by Théodore Courant.*)	2370	26th Sept. 1863	William Clark.
Obtaining motive-power	2413	2nd Oct. 1863	Johann Ernst. Friedrich Lüdeke. Maurice Fischer.
Musical instruments	2490	10th Oct. 1863	John Wesley Goundry.
Means of and apparatus for paralysing, capturing or killing fish, birds and other animals.	2644	26th Oct. 1863	Isham Baggs.
Filters	2874	16th Nov. 1863	Charles Weightman Harrison.
Improvements in the construction and working of electric telegraphs and in apparatus connected therewith, partly applicable to other purposes.	3006	1st Dec. 1863	Henry Wilde.
Apparatus for regulating the passage of aëriform and other fluids. (*Communicated by Charles Joseph Louis Meynard.*)	3096	8th Dec. 1863	Michael Henry.
Improvements in the treatment and purification of plumbago for the manufacture of crucibles and other fireproof articles, and in apparatus employed therein.	3107	9th Dec. 1863	Thomas Vaughan Morgan.
Improvements in the means of communicating signals on board ship, on railways and for other purposes.	3208	19th Dec. 1863	Frederic Newton Gisborne.

For Electric Telegraphs, *see* "TELEGRAPHS."
For Magnetic Compasses, *see* "COMPASSES."
See also "ELECTRO-PLATING."

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
ELECTRO-PLATING AND GALVANIZING; DEPOSITING METAL BY ELECTRICITY.			
Manufacture of metallic vessels or receptacles for containing liquids or substances.	180	21st Jan. 1863	Frederic Augustus Busch.
Burglar-proof safes and strong-room doors and frames - - - - - - -	594	3rd March 1863	George Price. William Dawes.
Improvements in the means of and apparatus for electro-plating, said apparatus being also applicable to medical purposes.	2088	22nd Aug. 1863	Siegmund Moore.
Utilizing the waste flux from galvanizing works -	2356	24th Sept. 1863	James Webster.
Lawn mowing and grass cutting machines - - (*Galvanizing.*) (*Partly communicated by Henry Fisher.*)	3092	8th Dec. 1863	James Edward Boyd.
EMBOSSING; PRODUCING RAISED PATTERNS.			
Improvements in the construction and mode of working apparatus to be employed in pressing, moulding, shaping, embossing, crushing, shearing and cutting metallic and other substances.	37	5th Jan. 1863	Henry Bessemer.
Improvements in lamps and burners, and in apparatus employed for milling or ornamenting parts of lamps, which apparatus may also be applied to other similar uses.	491	23rd Feb. 1863	Ralph Martindale.
Manufacture of saddles - - - - -	499	24th Feb. 1863	John Clay.
Improvements in preparing and obtaining photographic impressions, and in the application of such impressions. (*Relief printing; facsimiles of cameos.*) (*Communicated by Alphonse Louis Poitevin.*)	586	2nd March 1863	William Clark.
Certain improvements in the method of producing surfaces in imitation of woods and in printing therefrom. (*Figuring and embossing.*)	779	25th March 1863	Joseph Hardman Worrall.
Engraving upon metals - - - - - (*Rollers for embossing.*) (*Communicated by Louis Charles Emile Vial.*)	795	26th March 1863	George Davies.
Improvements in calendering, embossing and other such machines used for finishing woven fabrics, part of which improvements is also applicable to drying machines.	1208	13th May 1863	James Farmer.
Construction of and mode of working hydrostatic presses and hydraulic apparatus. (*For embossing.*)	1439	9th June 1863	Henry Bessemer.
Figuring, ornamenting and coloring fulled and felted fabrics and articles. (*Communicated by the Société Troty Latouche, frères.*)	1773	15th July 1863	Michael Henry.
An improved mode of producing raised patterns, figures or devices on felt hats, caps and bonnets.	1794	17th July 1863	Anne Catherine Veuve Durst Wild.
Certain improvements in printing stuffs and other fibrous fabrics.	1815	20th July 1863	Antoine Alexandre Pelaz.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
EMBOSSING, &c.—*continued.*			
Improvements in the making of safety paper and in the machinery or apparatus employed therein.	2700	31st Oct. 1863	William Tasker the younger.
Improvements in the manufacture of rollers or cylinders used by calico printers, which improvements are also applicable to other purposes. (*Cylinders for embossing.*)	3040	3rd Dec. 1863	Thomas Knowles.
ENAMELLING, ENAMELS.			
The preparation of a fluid for renewing the surface of japanned and enamelled leathers and cloths.	1298	23rd May 1863	William Hoey.
Manufacture of various articles with surfaces in imitation of different kinds of marbles or similar ornamental materials - - - - -	1863	27th July 1863	Frederick Ford. Lewis Ford.
An improved method of making and inlaying encaustic tiles or other plastic articles and substances - - - - -	2176	3rd Sept. 1863	William Boulton. Joseph Worthington.
ENGRAVING AND ETCHING; PRODUCING SUNK DEVICES.			
Improvements in dressing millstones, in ornamenting or engraving on glass, pottery and other similar substances, and in materials employed therein. (*Communicated by Cyprien Marie Tessié du Motay and Charles Raphael Maréchal.*)	488	23rd Feb. 1863	Richard Archibald Brooman.
Machinery for engraving by means of electricity -	633	6th March 1863	Michel Jourdin.
Engraving upon metals - - - (*Communicated by Louis Charles Emile Vial.*)	795	26th March 1863	George Davies.
Machinery or apparatus for marking, etching or engraving cylindrical and other surfaces.	1178	11th May 1863	Robert Burgess.
Improvements in sewing-machines, which said improvements are also applicable to other useful purposes - - - - - (*Applicable to engraving.*)	1528	18th June 1863	Jonas Rolph. Alfred Heald.
Improvements in photo-lithography, photo-zincography, and photographic engraving on copper or steel plates or on any other suitable substances.	1588	23rd June 1863	William Toovey.
Ornamenting porcelain - - -	1594	24th June 1863	James Leigh Hughes.
Certain improvements in printing stuffs and other fibrous fabrics.	1815	20th July 1863	Antoine Alexandre Pelaz.
Engraving - - - - (*Communicated by Armand Mauchain.*)	2038	17th Aug. 1863	Henri Adrien Bonneville.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
ENGRAVING, &c.—*continued.*			
An improved method of figuring and ornamenting cloths and other fabrics, and apparatus employed therein. (*Impressing patterns.*) (*Communicated by François Vouillon.*)	2586	21st Oct. 1863	Emile Alcan.
ENVELOPES.			
Envelopes	460	20th Feb. 1863	William Marsden.
Envelope folding machines	1245	18th May 1863	Rest Fenner. William Henry Hight.
Manufacture of hollow cutting tools (*For use of envelope makers.*)	1808	20th July 1863	William Simpson. John Hutton.
Fastening and securing envelopes, letters, despatches, parcels, packages and other similar articles.	2704	31st Oct. 1863	John Harcourt Brown.
An improved kind of envelope for the transmission of patterns or samples of merchandize by post	2709	2nd Nov. 1863	Thomas Adams. John Scott.
Machinery or apparatus for making envelopes and other similar purposes	3027	2nd Dec. 1863	Alfred William Halcy. Arthur Bingham. Richardson Webster.
Improvements in wrappers or envelopes for receiving or enclosing papers and various other articles.	3227	21st Dec. 1863	Julius Lorenz Wittenberg.
EXCAVATING AND TUNNELLING; DREDGING AND CLEANSING RIVERS.			
Improvements in the construction of underground railways or subways, and in carriages to be used or worked therein	557	27th Feb. 1863	Arthur Dudgeon. George Frederick Lee Meakin. Edward Ellis Allen.
Apparatus for cleaving and excavating pit coal and rock or earth.	560	27th Feb. 1863	Victor Désiré Delahaye.
Locomotive boring and winding engines	668	11th March 1863	Andrew Barclay.
Portable apparatus or instruments for rivetting, caulking, chipping and otherwise operating upon and treating metals and other substances. (*Tunnelling.*)	1095	1st May 1863	John M'Farlane Gray.
Improvements in apparatus for boring, mining and excavating or cutting, in motive-power engines, and in pressure gauges.	1322	26th May 1863	James Munro. Robert Scott.
Boring apparatuses	1857	25th July 1863	Paulin Etienne Gay.
Hydraulic apparatus (*For piercing tunnels.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Sinking, quarrying and excavating in the earth	2600	22nd Oct. 1863	James Mitchell.
Machinery for drilling, boring or excavating rock or other earthy substances.	2624	24th Oct. 1863	Edward Smith Crease.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
EXCAVATING, &c.—*continued.*			
Digging machinery - - - -	2676	29th Oct. 1863	Ormrod Coffeen Evans.
Machinery for excavating land, making cuttings and other earthworks.	2710	2nd Nov. 1863	Florent Joseph Vandenvinne.
Machinery for cutting and excavating coal and other minerals, applicable also to other mining purposes.	2837	13th Nov. 1863	Thomas Harrison.
Machinery for cutting coal and other minerals and stones.	3034	2nd Dec. 1863	Thomas Harrison.
EXTRACTS AND DECOCTIONS.			
Improvements in the method of and apparatus for preparing materials for the manufacture of paper and similar purposes, part of the invention being also applicable to other operations in which materials are subjected to the action of hot agents. (*Making extract of malt, &c.*)	1	1st Jan. 1863	Robert Hanham Collyer, M.D., F.C.S.
Apparatus for making extracts of hops and for selecting or separating the seeds and pollen from hops.	698	14th March 1863	Richard Moreland, junior.
Extraction of scents from plants, flowers and other odoriferous substances.	1109	4th May 1863	Edmund Richard Southby.
Improvements in obtaining vegetable extracts and in apparatus employed therein.	1345	28th May 1863	Thomas Jarvis.
Treating liquorice root to obtain liquid and solid extracts therefrom. (*Communicated by Frumence Nicolas Frezon.*)	1402	5th June 1863	Richard Archibald Brooman.
A new compound extract to be employed as a means for the cure of deafness.	1464	12th June 1863	William Sims.
Apparatus for evaporating and distilling - - (*Extracts.*)	2106	26th Aug. 1863	Jacques Louis Kessler.
Improvements in extracting essences and perfumes, and also oils and fats from matters containing them, also in bleaching and purifying oils and fats, and in apparatus employed therein.	2987	27th Nov. 1863	Heinrich Hirzel.
FABRICS; ELASTIC FABRICS.			
Manufacture of elastic fabrics - - -	4	1st Jan. 1863	Matthias Edward Bowra. Arthur Edward Francis.
Looms for weaving ribbons, elastic webbing and other narrow fabrics.	301	3rd Feb. 1863	Thomas Raworth.
Manufacture of oiled silk - - -	457	19th Feb. 1863	William Trustrum.
Ornamenting plush and other such textile fabrics (*See* "PRINTING.")	493	23rd Feb. 1863	Thomas Dickens. Albert Lungley Dickens. Harvey Heywood.
A new or improved fibrous substitute for human and other hair, to be used for all the purposes for which human and other hair is now used, and also for the manufacture of textile fabrics. (*See* "FIBRES.")	550	27th Feb. 1863	Werner Staufen.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FABRICS, &c.—*continued.*			
A new application and combination of materials to be employed in the manufacture of "skirtings."	566	28th Feb. 1863	Thomas Farra.
Improvements in cloth blankets and other fabrics to be used in machinery for printing fabrics, paper, hangings, and letter press. (*Communicated by Achille Clément.*)	578	2nd March 1863	Frederick Tolhausen.
The manufacture of a new or improved fabric and its application to the formation of ornaments for fire stoves and other decorative purposes.	583	2nd March 1863	Thomas Taylor.
An improved application of embroidery to cotton printed fabrics.	793	26th March 1863	Thomas Parkinson. John Wood.
A new fabric suitable for trimmings - - - (*Communicated by Jacques Desprez and Georges Montaillé.*)	1120	5th May 1863	Richard Archibald Brooman.
An improved dryer fabric for paper making -	1167	9th May 1863	William Boaler.
Manufacture of elastic material - - - (*Communicated by Gustave Mayer.*)	1229	16th May 1863	Benjamin Browne.
Certain improvements in the manufacture of "elastic webbing."	1275	21st May 1863	Nathaniel Jones Amies.
A new and improved ornamental fabric - -	1440	10th June 1863	William Madders.
An improved fabric and improvements in looms for manufacturing the same.	2160	1st Sept. 1863	Pierre Joyot.
An improved mixed fabric and in the application thereof to covering umbrellas and parasols.	2273	16th Sept. 1863	Robert Thomson.
A new application of material for covering crinolines and in the manufacture of the said material. (*Waste domestic.*)	2369	26th Sept. 1863	Richard Clarke.
An improved fabric for the production of permanent electricity applicable for wearing apparel. (*Woven or felted.*) (*Communicated by Théodore Courant.*)	2370	26th Sept. 1863	William Clark.
Improvements in the manufacture of woven fabrics applicable to covering telegraph wires.	2387	29th Sept. 1863	Sam Mendel.
An improved method of figuring and ornamenting cloths and other fabrics, and apparatus employed therein. (*See* "ENGRAVING.") (*Communicated by François Vouillon.*)	2588	21st Oct. 1863	Emile Alcan.
The production of thread, cordage and woven textile fabrics from prepared fibre of hemp or any of the plants known of the order or genus "Cannabis," and in mixing such prepared fibre with cotton, silk or animal wool.	2950	24th Nov. 1863	St. George Gregg. Thomas Gray.
Manufacture of paper, thread, cordage and fabrics from beetroot.	2967	25th Nov. 1863	Louis Accarain.
Looms for weaving elastic fabrics - -	2984	27th Nov. 1863	James Clark.
Looms for weaving elastic fabrics - - -	2986	27th Nov. 1863	Edward Gardner.
An improved manufacture of elastic bands applicable to the production of ladies' skirts or "crinolines."	3077	7th Dec. 1863	Charles Brown.
Manufacture of ornamental fabrics.	3305	31st Dec. 1863	Robert Bell.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FEATHERS; ARTIFICIAL FEATHERS AND FLOWERS.			
Improvements in the manufacture of hats and bonnets, and mode of preparing feathers to be used in the said manufacture.	1047	27th April 1863	Hilaire Emile Carchon. Eugene François Raybaud.
A new fabric suitable for trimmings - - (*Communicated by Jacques Desprez and Georges Montaillé.*)	1120	5th May 1863	Richard Archibald Brooman.
Manufacture of hollow cutting tools - - (*For use of artificial florists.*)	1808	20th July 1863	William Simpson. John Hutton.
Hydraulic apparatus - - - - (*Used in manufacture of artificial flowers.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
FENCES AND RAILINGS.			
Posts or pillars for fences and gates - - (*Communicated by David Middleton.*)	1311	25th May 1863	Edmund Hunt.
An improved loose clip and socket joint applicable to bedsteads, sofas, chairs and other articles of furniture and of fencing.	1348	29th May 1863	Eli Ironmonger.
Improvements in metal screens and sieves for screening and sifting, applicable also to other openwork articles. (*Applicable to fencing.*)	1540	19th June 1863	William Hicklin.
Certain improvements in iron hurdles and fencing -	1626	30th June 1863	Joseph Simpson.
Improvements in fencing land and in hanging gates	1651	2nd July 1863	John King.
An improved portable fence for sheep and cattle pens or for other enclosures.	1720	10th July 1863	Alexander Robert Johnston.
An improved guard or fence for coal, iron, stone or other pits, warehouse or other lifts, sack holes, or other places requiring a guard or fence.	1745	13th July 1863	Joseph Barton.
A new metallic alloy - - - - (*For making rails.*) (*Communicated by Henri Micolon.*)	2086	22nd Aug. 1863	Richard Archibald Brooman.
Improvements in the manufacture and construction of fences, part of which are also applicable to the manufacture and construction of gate posts, and to poles and posts used for telegraph and signal purposes, and for stretching telegraph wires.	2192	5th Sept. 1863	Joseph Rowell.
Lamps and stoves for the application of blast heat to horticultural, agricultural and other specified purposes. (*To char posts and palings.*)	2535	16th Oct. 1863	Frederick George Stuber.
Mode of connecting and sustaining the intersecting bars of iron fences, hurdles, gates and other analogous structures.	2978	27th Nov. 1863	James Andrew Ramsay Main.
Pillars and apparatus for straining wire - -	3031	2nd Dec. 1863	John Harper.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FIBRES. (*Obtaining from Plants, Recovering from Manufactured Goods, Separating, Cleansing, Packing.*)			
The application of a fibre obtained from a certain plant as a substitute or to be used with silk, cotton, flax and such like materials, which fibre has not hitherto been applied to any of those purposes, and for certain methods of preparing the same for such purposes.	33	5th Jan. 1863	John Alexander Cooper.
Machinery for clearing and separating the woody parts from the fibrous portion of flax, hemp or other like material - - - - -	39	5th Jan. 1863	David Nevin. William Coppin.
Presses for pressing cotton and other substances - (*Communicated by John Hodgart.*)	47	6th Jan. 1863	Matthew Hodgart.
Manufacture of fibrous material for cleansing machinery and other purposes.	64	7th Jan. 1863	Henry Harben.
Improved machinery for breaking and cleaning flax, hemp and other fibre yielding plants. (*Communicated by Gelston Sanford and James Edward Mallory.*)	68	8th Jan. 1863	Alexander Guild.
Machinery or apparatus for cleaning and preparing cotton or other fibrous materials to be spun.	80	9th Jan. 1863	Daniel Collinge.
Hydrostatic presses - - - - - (*For packing cotton.*)	87	10th Jan. 1863	Robert Lüthy.
Willowing and opening cotton and other fibrous substances.	183	21st Jan. 1863	James Holt.
Improvements in the preparation or manufacture of textile materials, and in the machinery or apparatus used therein. (*See* "WINDING.")	207	23rd Jan. 1863	Alexander Henderson.
Certain improvements in preparing and bleaching "rhea" and other fibrous materials and fibres, which improvements are also applicable to bleaching yarns or piece goods - - -	300	3rd Feb. 1863	Charles Smithies. George Lancelot Smithies.
Apparatus and processes for steeping, boiling, washing, bleaching and dyeing fibrous materials, or slivers, slubbings, rovings, yarns or woven fabrics of the same - - - -	367	10th Feb. 1863	William Whitaker. William Tongue.
Improvements in the method of and apparatus for separating the fibres of straw, wood and other vegetable substances, and extracting the gummy and coloring matters therefrom, to render them fit for paper stock or for other purposes. (*Communicated by Azel Storrs Lyman.*)	408	14th Feb. 1863	William Clark.
Machinery or apparatus for cleaning cotton from seeds - - - - - - -	445	18th Feb. 1863	John Platt. William Richardson.
Process of cleaning organic matter - - - (*Wool.*) (*Communicated by François Théophile Moison.*)	486	23rd Feb. 1863	Edward Thomas Hughes.
A new or improved fibrous substitute for human and other hair, to be used for all the purposes for which human and other hair is now used, and also for the manufacture of textile fabrics.	550	27th Feb. 1863	Werner Staufen.
Machinery or apparatus employed in the preparation or treatment of hemp and other textile materials. (*Communicated by François Jules Vignaud.*)	561	27th Feb. 1863	John Henry Johnson

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FIBRES—*continued.*			
Machinery or apparatus for cleaning, steaming and preparing cotton or other fibrous materials to be spun.	569	28th Feb. 1863	Daniel Collinge.
Treatment of certain fibrous vegetable substances with a view to the production of textile materials therefrom. (*Communicated by Vittozio Secondo Ferrero.*)	658	9th March 1863	John Henry Johnson.
Cleaning and preparing cotton for spinning - -	659	11th March 1863	Henry Fletcher.
Treatment of rags and obtaining valuable chemical products from the animal fibre therein.	731	18th March 1863	William Lorberg.
Machinery for beating and drying wool and other textile and filamentous substances. (*Communicated by Louis César Carlier Vitu.*)	746	20th March 1863	Richard Archibald Brooman.
Bleaching jute fibre - - -	780	25th March 1863	George Stuart.
Machinery for scouring wool - - - (*Communicated by Jean Henri Chaudet and Firmin Natalis Thuillier.*)	803	27th March 1863	Richard Archibald Brooman.
Rag machines - - - - -	806	27th March 1863	James Dixon Asquith. George Greenwood.
Machinery for ginning cotton - - -	833	31st March 1863	John Macmillan Dunlop.
Treatment or preparation and manufacture of jute, hemp, flax and other fibrous or textile materials.	852	2nd April 1863	George Addison Cox.
Preparing and bleaching jute and other vegetable fibres for spinning and other purposes.	886	8th April 1863	Thomas Gray.
Improvements in machinery for washing and drying wool and other fibres and rags, also in tentering, stretching and drying fabrics.	890	8th April 1863	James Lee Norton.
Machinery for separating and straightening the fibres of silk waste and other fibrous substances.	930	13th April 1863	Robert Newton.
Improvements in preparing and bleaching flax, hemp and other vegetable fibres, by which a brilliant lustre is imparted to those substances and the fibres are separated.	945	15th April 1863	Thomas Gray.
Apparatus for drying animal, vegetable and mineral substances.	973	18th April 1863	William Stevenson Macdonald.
Machinery for cleaning, sorting according to size, and doubling silk and other threads.	1039	25th April 1863	Ira Dimock.
Improvements in the means or apparatus employed for recovering the fibres of wool from fabrics or materials composed of wool combined with cotton or other vegetable substances.	1075	29th April 1863	John Rowley.
Improvements in cotton gins and in the method of driving the same, part of which improvements is applicable to other purposes - -	1079	29th April 1863	Evan Leigh. Frederick Allen Leigh.
Apparatus for manufacturing saws suitable for ginning cotton and for other uses. (*Communicated by George Washington Emery.*)	1194	12th May 1863	Horace Leeman Emery.
Improvements in preparing and spinning flax and other vegetable fibres and filaments, and in machinery employed therein.	1235	16th May 1863	Joseph Gibbs.
Treatment of certain vegetable fibres for the preparation of textile materials therefrom.	1252	19th May 1863	Ferrar Fenton.
Improvements in treating flax and other fibrous plants in order to prepare the fibres thereof for spinning, and in apparatus employed therein.	1254	19th May 1863	Henry John Olding.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FIBRES—*continued.*			
Extracting the fibre from zostera marina and other aquatic vegetable productions.	1271	21st May 1863	James Steart.
Certain improvements in apparatus called "gins" for cleansing seed cotton.	1323	26th May 1863	Edward Kenworthy Dutton.
Certain improvements in machines for separating the fibre from the flesh of plants. (*Communicated by Eduardo Juanes y Patrullo.*)	1327	26th May 1863	William Edward Newton.
Treating the waste liquor obtained in the preparation of esparto grass - - -	1342	28th May 1863	Thomas Richardson. Robert Irvine.
Machines for "ginning" cotton - - (*Communicated by Jules Alfred Chaufaurier.*)	1387	3rd June 1863	George Davies.
Improvements in the construction of presses for forming bales of cotton and other materials, and in the construction of fastenings for and means for applying bands to such bales. (*Partly communicated by David M'Comb.*)	1390	3rd June 1863	James Jennings M'Comb.
Improvements in treating flax, hemp and other vegetable fibrous substances in order to bleach and separate the fibres.	1403	5th June 1863	Thomas Gray.
Machinery or apparatus for washing wool and other fibrous materials.	1426	8th June 1863	John Petrie.
Improvements in treating floss silk and silk waste, and in apparatus for the same and other like purposes. (*Communicated by Charles Torne, fils.*)	1451	11th June 1863	Michael Henry.
Machinery for burring, ginning, cleaning and carding cotton and other fibrous substances -	1465	12th June 1863	Francis Alton Calvert. Francis Calvert.
Machinery for opening and cleaning cotton and other fibrous substances. (*Communicated by John Edo Van Winkle.*)	1494	15th June 1863	Henry Bernoulli Barlow.
Certain improvements in apparatus for steaming cotton or other fibrous substances - -	1533	19th June 1863	Edmund Howarth. John Brown.
Treatment of broom for the manufacture of paper pulp. (*Communicated by Louis Alexandre Joseph Deplanque.*)	1559	20th June 1863	William Clark.
Treatment and preparation of materials for the manufacture of paper. (*Separating fibres from mixed fabrics.*)	1652	3rd July 1863	Charles Martin.
Improvements in machinery for dragging bristles, applicable also to drawing or sorting fibres and hair into different lengths.	1813	20th July 1863	Augustus Smith.
Improved machinery for breaking or softening and preparing flax, hemp, jute, tow and other fibrous substances.	1823	21st July 1863	William Lyle Aberdein.
Improvements in and apparatus for dressing or preparing for spinning hemp, flax, manilla hemp and other like fibrous material.	1833	22nd July 1863	James Ronald.
Certain improvements in the method of preparing and treating "codilla fibre" and "tow" to render them available as a substitute for cotton or to be mixed therewith.	1905	1st Aug. 1863	John Hoefler.
Machinery for pressing cotton and for crushing and pressing other substances, the said machinery being adaptable for locomotion on railways or on common roads.	2056	18th Aug. 1863	Charles George Wilson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FIBRES—*continued.*			
An improved double Mac Carty gin or machinery used for cleaning cotton from its seeds.	2094	24th Aug. 1863	Claude Sosthéne Grasset.
Improvements in and applicable to cotton gins -	2133	29th Aug. 1863	George Lowry.
Machinery or apparatus for steaming and opening cotton and other fibrous materials.	2136	29th Aug. 1863	Thomas Williams.
Improvements in the manufacture of wadding, paper and felted fabrics, and in the preparation of vegetable fibres to be used in such manufactures.	2164	1st Sept. 1863	George Whiffen Ewens.
Means of utilizing refuse azoted matters of commerce for the manufacture of various chemical products. (*Recovering flax and cotton.*) (*Communicated by Amédée Gélis and Lucien Dusart.*)	2222	9th Sept. 1863	William Clark.
An improved method of preparing the fibres of hemp, flax and other vegetable materials for manufacturing purposes.	2258	14th Sept. 1863	George Whitfield Billings.
Treatment of rags and obtaining valuable chemical products from the animal fibre therein.	2294	18th Sept. 1863	William Lorberg.
Improvements in machinery or apparatus for ginning cotton, also for cleaning, opening and preparing cotton, wool or other fibrous substances.	2310	19th Sept. 1863	Charles Louis Fleischmann.
An improved construction of cotton gin - -	2504	12th Oct. 1863	George Mountford.
Cotton gins - - - - - -	2511	13th Oct. 1863	Thomas Cowell Craven.
Certain improvements in "bailing boxes" used in packing cotton or other fibrous materials -	2541	17th Oct. 1863	William Routledge. Frederick Francis Ommanney.
Machinery or apparatus for opening, cleaning, and mixing cotton or other fibrous materials -	2559	20th Oct. 1863	James Taylor. James Lees. John Lees.
An improved treatment of textile substances to obtain a species of or substitute for cotton. (*Communicated by Joseph Jaubert.*)	2560	20th Oct. 1863	Ernest Henry Luebbers.
Improvements in treating ligneous substances, in separating and recovering the fibrous portions therefrom, in preparing, bleaching and sizing the same, and in machinery employed therein. (*Communicated by Pierre Celestin Victor Baud and Theodore Casimir Delamarre.*)	2587	21st Oct. 1863	Richard Archibald Brooman.
Improvements in preparing and cleansing vegetable fibres, and in machinery employed therein.	2605	22nd Oct. 1863	Charles James Pownall.
Apparatus for opening and conditioning cotton and other fibrous substances.	2660	28th Oct. 1863	William Wanklyn.
Cotton gins - - - - -	2686	30th Oct. 1863	François Durand.
Apparatus for oiling wool - - -	2687	30th Oct. 1863	Martyn John Roberts.
Certain improvements in apparatus for coating or covering the surfaces of rollers or cylinders with leather or other material. (*Cotton gins.*)	2737	5th Nov. 1863	Edward Kenworthy Dutton.
Machinery for ginning and cleaning cotton, a part of which are applicable to machines for other purposes.	2765	7th Nov. 1863	Horace Leeman Emery.
Improvements applicable to machinery for opening, cleaning, preparing and carding wool and other fibrous substances.	2808	11th Nov. 1863	William Clissold.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
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Machines for "ginning" cotton - - (*Communicated by Jules Alfred Chaufourier.*)	1387	3rd June 1863	George Davies.
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Improvements in treating flax, hemp and other vegetable fibrous substances in order to bleach and separate the fibres.	1403	5th June 1863	Thomas Gray.
Machinery or apparatus for washing wool and other fibrous materials.	1426	8th June 1863	John Petrie.
Improvements in treating floss silk and silk waste, and in apparatus for the same and other like purposes. (*Communicated by Charles Torne, fils.*)	1451	11th June 1863	Michael Henry.
Machinery for burring, ginning, cleaning and carding cotton and other fibrous substances -	1465	12th June 1863	Francis Alton Calvert. Francis Calvert.
Machinery for opening and cleaning cotton and other fibrous substances. (*Communicated by John Edo Van Winkle.*)	1494	15th June 1863	Henry Bernoulli Barlow.
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Improvements in and apparatus for dressing or preparing for spinning hemp, flax, manilla hemp and other like fibrous material.	1833	22nd July 1863	James Ronald.
Certain improvements in the method of preparing and treating "codilla fibre" and "tow" to render them available as a substitute for cotton or to be mixed therewith.	1905	1st Aug. 1863	John Hoefler.
Machinery for pressing cotton and for crushing and pressing other substances, the said machinery being adaptable for locomotion on railways or on common roads.	2056	18th Aug. 1863	Charles George Wilson.

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FIBRES—*continued.*			
An improved double Mac Carty gin or machinery used for cleaning cotton from its seeds.	2094	24th Aug. 1863	Claude Sosthéne Grasset.
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Means of utilizing refuse azoted matters of commerce for the manufacture of various chemical products. (*Recovering flax and cotton.*) (*Communicated by Amédée Gélis and Lucien Dusart.*)	2222	9th Sept. 1863	William Clark.
An improved method of preparing the fibres of hemp, flax and other vegetable materials for manufacturing purposes.	2258	14th Sept. 1863	George Whitfield Billings.
Treatment of rags and obtaining valuable chemical products from the animal fibre therein.	2294	18th Sept. 1863	William Lorberg.
Improvements in machinery or apparatus for ginning cotton, also for cleaning, opening and preparing cotton, wool or other fibrous substances.	2310	19th Sept. 1863	Charles Louis Fleischmann.
An improved construction of cotton gin - -	2504	12th Oct. 1863	George Mountford.
Cotton gins - - - - - -	2511	13th Oct. 1863	Thomas Cowell Craven.
Certain improvements in "bailing boxes" used in packing cotton or other fibrous materials -	2541	17th Oct. 1863	William Routledge. Frederick Francis Ommanney.
Machinery or apparatus for opening, cleaning, and mixing cotton or other fibrous materials -	2559	20th Oct. 1863	James Taylor. James Lees. John Lees.
An improved treatment of textile substances to obtain a species of or substitute for cotton. (*Communicated by Joseph Jaubert.*)	2560	20th Oct. 1863	Ernest Henry Luebbers.
Improvements in treating ligneous substances, in separating and recovering the fibrous portions therefrom, in preparing, bleaching and sizing the same, and in machinery employed therein. (*Communicated by Pierre Celestin Victor Baud and Theodore Casimir Delamarre.*)	2587	21st Oct. 1863	Richard Archibald Brooman.
Improvements in preparing and cleansing vegetable fibres, and in machinery employed therein.	2605	22nd Oct. 1863	Charles James Pownall.
Apparatus for opening and conditioning cotton and other fibrous substances.	2660	28th Oct. 1863	William Wanklyn.
Cotton gins - - - - - -	2686	30th Oct. 1863	François Durand.
Apparatus for oiling wool - - -	2687	30th Oct. 1863	Martyn John Roberts.
Certain improvements in apparatus for coating or covering the surfaces of rollers or cylinders with leather or other material. (*Cotton gins.*)	2737	5th Nov. 1863	Edward Kenworthy Dutton.
Machinery for ginning and cleaning cotton, a part of which are applicable to machines for other purposes.	2765	7th Nov. 1863	Horace Leeman Emery.
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Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FIBRES—*continued.*			
Cotton gins on the roller principle - -	2844	14th Nov. 1863	John Charles Wilson.
Mills for cleaning cotton seed - - - (*See* "THRASHING.")	2857	14th Nov. 1863	James Harrison.
Method of driving and feeding cotton gins, and of conveying away the ginned cotton and seeds therefrom - - - - - -	2863	16th Nov. 1863	Evan Leigh. Frederick Allen Leigh.
Machinery for ginning cotton and for opening cotton and other fibrous substances - -	2915	20th Nov. 1863	Benjamin Dobson. Edward Barlow. Peter Knowles.
Treatment of vegetable fibres for the production of paper pulp or half stuff therefrom.	2931	21st Nov. 1863	Ferrar Fenton.
Extracting the fibre from zostera marina and other aquatic vegetable productions.	2941	21st Nov. 1863	James Steart.
The production of thread, cordage and woven textile fabrics from prepared fibre of hemp or any of the plants known of the order or genus "Cannabis," and in mixing such prepared fibre with cotton, silk or animal wool.	2950	24th Nov. 1863	St. George Gregg. Thomas Gray.
Machinery for breaking and cleaning flax, hemp and other fibre yielding plants. (*Communicated by James Edward Mallory and Gelston Sanford.*)	2958	24th Nov. 1863	William Edward Newton.
Manufacture of paper, thread, cordage and fabrics from beetroot.	2967	25th Nov. 1863	Louis Accarain.
A new method of discharging color from rags used for paper making or other purposes, and in treating of vegetable fibres by such process.	2980	27th Nov. 1863	Thomas Gray.
Machinery or apparatus for opening, cleaning and preparing cotton and other fibrous materials to be spun.	3056	5th Dec. 1863	James Conlong.
Construction of machinery for ginning cotton -	3079	8th Dec. 1863	William Wanklyn.
Improved machinery for the treatment of tow and other fibrous substances.	3112	10th Dec. 1863	Morritz Friedlander.
An improved rag machine cylinder or swift and tooth of an improved principle, for the purpose of pulling up woollen and cotton rags, silk rags, hair bagging, and for cleaning and opening wools and waste, and for the pulling up of fibrous substances in the rag.	3113	10th Dec. 1863	Alexander Reid. George Rydill.
Preparation or manufacture of cocoa nut fibre for matting purposes.	3125	11th Dec. 1863	Edward Shepherd.
Improvements in utilizing the waste liquors resulting from the preparation of fibrous matters in paper pulp making, and in the machinery or apparatus to be used therein - - - (*See* "ALKALIES.")	3168	15th Dec. 1863	Henry Chadwick. John Clench.
Improvements in pressing cotton and other fibrous substances into bales, and in apparatus to be used for this purpose. (*Communicated by George Brunton.*)	3170	15th Dec. 1863	Charles James Robinson.
Certain improvements in machinery for opening and scutching cotton and other fibrous substances.	3201	19th Dec. 1863	William Noton.
Construction of cotton gins - - - - - (*Communicated by Enoch Osgood.*)	3230	21st Dec. 1863	Alfred Vincent Newton.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FIBRES—*continued.*			
Improvements in and apparatus for the conversion of ropes and other cordage into oakum, tow and paper stuff, parts of which are applicable to teasing and cleaning wool or hair on skins, and dressing waste tow, wool, hair and other "waste" fibres.	3246	23rd Dec. 1863	James Ronald.
Cotton gins - - - - - - (*Communicated by Israel Fanning Brown.*)	3283	29th Dec. 1863	Theodore Bourne.
Cotton gins - - - - - - - - -	3286	29th Dec. 1863	Henry Bayley.
Machinery or apparatus for softening and separating the fibres of fibrous materials.	3287	29th Dec. 1863	William Whitaker. William Tongue.
Manufacture of rollers or cylinders in which a certain degree of elasticity is required - - (*For cotton gins.*)	3301	30th Dec. 1863	John Platt. William Richardson.
See also "SPINNING (OPENING)."			
FILES AND CLIPS; FORCEPS.			
Tongs or forceps for grasping articles out of reach of the hand - - - - - -	403	14th Feb. 1863	William Baylis. Thomas Henry Hopwood.
Clips or holders for inserting and fixing photographic pictures in albums.	1434	9th June 1863	John Murray.
Apparatus for clipping or binding together letters, music and other loose sheets.	2928	21st Nov. 1863	Charles Edward Wright.
FILES AND RASPS.			
Machinery for rolling, grinding and cutting files - (*Communicated by William Picket Pierce.*)	119	14th Jan. 1863	George Tomlinson Bousfield.
An improved haft or handle for holding tools or instruments of various sizes. (*Files.*)	895	9th April 1863	Francis Joseph Risse.
An improved mode of repairing worn-out files and rendering them again fit for use. (*Communicated by Charles Adolphe Clavel.*)	1010	23rd April 1863	William Edward Newton.
Machinery for rolling, grinding and cutting files and rasps. (*Communicated by William Picket Pierce.*)	1218	14th May 1863	George Tomlinson Bousfield.
Machinery or apparatus for grinding and polishing metallic articles. (*File-blanks.*)	2143	29th Aug. 1863	James Dodge.
Machinery for rolling and cutting files and rasps.	2385	29th Sept. 1863	Francis Preston.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FILES, &c. — *continued.*			
Improvements in machinery for rolling, shaping or forging metals, and in apparatus for grinding and polishing the same. (*Steel for files.*)	2506	13th Oct. 1863	James Dodge.
Apparatus for forging and tempering bayonet blades, files and other articles. (*Communicated by Hervey Waters.*)	3251	23rd Dec. 1863	George Tomlinson Bousfield.
FILTERING, PURIFYING AND CLARIFYING LIQUIDS; FILTERS; DISTILLING WATER; SOFTENING WATER.			
Improvements in the condensation of steam and in apparatus for the same. (*Communicated by Amédée Mathurin Gabriel Sébillot.*)	274	29th Jan. 1863	William Clark.
An improved mode of refining and purifying oils -	579	2nd March 1863	John Watson Burton.
Separation or obtaining of ammonia from azoted matters in the preparation of manure. (*Communicated by Lucien Henry Blanchard and Théodore Chateau.*)	761	21st March 1863	William Clark.
Apparatus for separating fluids from more solid matters mixed or combined therewith.	982	20th April 1863	James Robey.
A filtering apparatus for treating by pressure oils, syrups and all sorts of liquids susceptible of filtering. (*Communicated by Edmund Marquis de Ruffo Bonneval and Joseph Mouren.*)	1027	24th April 1863	John Henry Johnson.
Apparatus for straining and drawing off liquids -	1105	2nd May 1863	Samuel John Bartlett.
Improvements in expressing liquid and moisture from substances, and in separating the liquid from the solid portions thereof, applicable also to the filtration of liquids - - - -	1347	28th May 1863	William Needham. James Kite.
Machinery or apparatus for filtering or cleansing water or other fluids.	1479	13th June 1863	Thomas Wrigley.
Improved apparatus for straining or for mixing and straining liquid and solid substances.	1590	24th June 1863	Theophilus Redwood.
Filtering apparatus - - - - -	1670	4th July 1863	James Oxley.
Certain improvements in apparatus for purifying water.	1820	21st July 1863	Frederick Ludwig Hahn Danchell.
Improvements in expressing and filtering oil from seeds and liquids from other substances containing the same, and in apparatus employed therein. (*Communicated by Guillaume Cregut and Tschiffeli Brothers.*)	2078	21st Aug. 1863	Richard Archibald Brooman.
Apparatus for heating and purifying water - -	2087	22nd Aug. 1863	Louis Emile. Constant Martin.
Apparatus for evaporating and distilling - - (*Distilling salt water.*)	2106	26th Aug. 1863	Jacques Louis Kessler.
Improvements in apparatus for cooking and for obtaining fresh water for use on shipboard and otherwise.	2158	1st Sept. 1863	George Russell.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FILTERING, &c.—*continued.*			
Surface condensers for steam and other vapours - (*For distillation af sea water.*) (*Communicated by George Wagstaff Yapp.*)	2566	20th Oct. 1863	William Snell.
Certain improvements in the expression of oil from oil yielding substances, and in the production of oil cake and other residuary matters.	2648	27th Oct. 1863	John Marshall.
Improvements in saturating, washing and cleansing charcoal and other matters, applicable also to the separation of syrups from sugar.	2855	14th Nov. 1863	Lauchlan Mackirdy.
Filters - - - - - -	2874	16th Nov. 1863	Charles Weightman Harrison.
Apparatus for obtaining fresh water from sea water	3002	30th Nov. 1863	John Matthias Ollis.
Ships' cooking and distilling apparatus - - (*Obtaining fresh water.*) (*Communicated by Auguste Cardinal, junior.*)	3156	14th Dec. 1863	Richard Archibald Brooman.
FINISHING, DRESSING, SINGEING, SHEARING, FOLDING AND PRESSING WOVEN FABRICS, YARNS, &c.			
Finishing or stiffening textile fabrics - -	8	1st Jan. 1863	James Jones.
Certain improvements in the method of dressing and finishing silk fabrics, and fabrics composed of silk, cotton and wool.	19	2nd Jan. 1863	Henry John Sergeant.
An improved mode of perching and dressing textile fabrics during the process of weaving.	55	7th Jan. 1863	William Crabtree. James Crowther.
An improved method of and means or apparatus for finishing textile fabrics.	181	21st Jan. 1863	Joseph Moxon Kirk.
Machinery for drying yarns or threads - -	200	22nd Jan. 1863	William Blackwood. John Blackwood.
Certain improvements in the mode of fixing coloring matter on cotton, silk, wool and other fibres and materials, and certain improvements in finishing such like and other textile fabrics and yarns.	219	24th Jan. 1863	Edward Booth. George Booth. Andrew Swallow.
Heating arrangements of stoves for drying woven fabrics.	244	28th Jan. 1863	Horatio Watson.
Apparatus for polishing yarn, twine, threads and other similar materials.	324	5th Feb. 1863	Joseph Gill. James Parkin.
Means or apparatus for dressing lace and other fabrics.	366	10th Feb. 1863	John Francis Bottom.
Improvements in press papers and in the method or means of drying them and other similar sheets of paper, applicable also for the drying of woven fabrics, yarns, wool, cotton or other fibrous substances.	415	16th Feb. 1863	James William Crossley.
Manufacture of oiled silk - - -	457	19th Feb. 1863	William Trustrum.
A new aromatic vinegar for removing stains from cloth and other materials. (*Communicated by Philippe Prudon and Edouard Cari Mantrand.*)	648	9th March 1863	Henri Adrien Bonneville.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FINISHING, &c.—*continued.*			
Machinery for opening twisted yarns and woven fabrics. (*Finishing machine.*)	671	11th March 1863	James Tomlinson.
Machinery for dressing, raising and brushing silk and cotton velvets, velveteens, cords, plushes and other piled fabrics.	672	11th March 1863	Joseph Renshaw.
Improvements in finishing woollen, worsted and other fabrics, and in machinery or apparatus to be used therein.	675	12th March 1863	Henry Dyson Taylor. John William Taylor.
Means or apparatus for stretching fabrics -	782	25th March 1863	Richard Armitage. Charles Senior.
An improved composition for rendering cloth, paper and similar articles transparent and waterproof. (*Communicated by James Hodgskin.*)	824	31st March 1863	Edward Thomas Hughes.
Finish of threads and yarns - - - - -	856	4th April 1863	James Blain.
A new composition for dressing and preparing silk, cotton and woollen tissues and fibres, and also mixtures of the same. (*Communicated by Jacques Mathevon.*)	873	7th April 1863	Henry Gilbee.
Machinery for washing and drying wool and other fibres and rags, also in tentering, stretching and drying fabrics.	890	8th April 1863	James Lee Norton.
Improved compounds or compositions for sizing, stiffening and coloring yarns and textile fabrics.	893	9th April 1863	David James Cooke.
Machinery for folding or plaiting fabrics - -	980	20th April 1863	George Graham. William Graham. John Graham.
Improvements in calendering, embossing and other such machines used for finishing woven fabrics, part of which improvements is also applicable to drying machines.	1208	13th May 1863	James Farmer.
Certain improvements in machinery or apparatus used in the processes or operations of drying, dressing, brushing, waxing and finishing fabrics.	1210	14th May 1863	Thomas Lawrence.
Machinery or apparatus employed in the dressing of lace or other fabrics.	1237	16th May 1863	Thomas Cox Stretton.
Machinery and apparatus for stretching and drying cotton and other fabrics or materials.	1306	25th May 1863	James Hesford.
Improved apparatus for pressing, smoothing and finishing garments or parts of garments.	1343	28th May 1863	Frederick Osbourn.
A new and improved ornamental fabric - -	1440	10th June 1863	William Madders.
Improvements in treating floss silk and silk waste, and in apparatus for the same and other like purposes. (*Communicated by Charles Torne, fils.*)	1451	11th June 1863	Michael Henry.
An improved combination of materials to be employed for the purposes of sizing and stiffening.	1467	12th June 1863	Joseph Place.
Adapting tapes, ribbons and other such narrow fabrics or thread to surfaces from which they may be unwound or upon which they may be rewound.	1486	13th June 1863	Marcus Brown Westhead.
Machinery for plaiting and measuring woven fabrics - - - - - - -	1589	24th June 1863	Samuel Knowles. Robert Hayward.
Machinery for stretching and drying fabrics - (*Communicated by Alexandre Fortuné Tulpin.*)	1608	26th June 1863	Alfred Tulpin.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FINISHING, &c.—*continued.*			
Machinery or apparatus for sizing and drying yarns and fabrics - - - -	1810	20th July 1863	Robert Benjamin Brassey. James Hargreaves.
Improvements in making all woven and thready fabrics waterproof, and in finishing or surfacing fabrics generally. (*Communicated by Etienne Guillaume.*)	1836	22nd July 1863	Charles Bealay.
Certain improvements in preparing, beetling or finishing textile fabrics, such as cotton, wool, linen or other fibrous materials.	1845	23rd July 1863	William Garforth. James Garforth.
Improvements in sizing and finishing fabrics, and in the machinery or apparatus employed therein.	1861	27th July 1863	John Wellington Welch.
Improvements in fulling, thickening, felting and cleansing cloths, and in apparatus connected therewith.	1918	4th Aug. 1863	Charles Gouty.
An improved mode and apparatus for dressing, finishing and imparting lustre to yarn and thread made of silk, cotton and other fibrous substances. (*Communicated by Emanuel Burgy and Louis Guillemin.*)	1989	12th Aug. 1863	Louis Rudolph Bodmer.
Machinery for finishing woven fabrics - -	2036	17th Aug. 1863	John Smith.
An improved machine for glossing and glazing all kinds of threads. (*Communicated by Alfred Julien Thiriez, Edouard Julien Thiriez and Victor Charles Julien Thiriez.*)	2180	3rd Sept. 1863	Henri Adrien Bonneville.
Improvements in printing on certain and other terry and velvet pile carpets, felted cloths and other fabrics and materials, and in the processes and apparatus connected therewith.	2207	8th Sept. 1863	Joseph Burch.
Improvements in glazing and rolling press papers, pasteboard and other paper requiring to be glazed or rolled, and in the means or apparatus employed therein - - - -	2232	10th Sept. 1863	Holmes Wright. John William Wright. William Clough.
Improvements in cutting or finishing matting and similar fabrics, and in the machinery used therefor.	2265	16th Sept. 1863	Andrew Fleming.
Machinery for stretching woven fabrics - -	2333	22nd Sept. 1863	Joseph Renshaw. John Haworth,
A new application of material for covering crinolines, and in the manufacture of the said material. (*Raising pile on waste domestic.*)	2369	26th Sept. 1863	Richard Clarke.
Finishing woollen fabrics made on twist lace machinery.	2427	3rd Oct. 1863	Edmund Pratt.
Friction or glazing calenders - - -	2479	9th Oct. 1863	James Mather.
Machinery for plaiting or folding fabrics - -	2608	22nd Oct. 1863	Henry Bridson. John Alcock.
Improvements in apparatus used in dressing lace and other textile fabrics, and suitable also to the application of dyes or colouring matters thereto.	2628	24th Oct. 1863	Francis Bryan Baker.
Improvements in machinery for finishing or beetling woven fabrics, which improvements are also applicable to fulling machines.	2799	11th Nov. 1863	John Smith.
Machinery for beetling and finishing cloth -	2829	13th Nov. 1863	William Chambers.
Machinery or apparatus for singeing woven fabrics	2853	14th Nov. 1863	Gustav Lindemann.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FINISHING, &c.—*continued.*			
Improvements in sizing or dressing and in drying fibrous materials or fabrics, and in apparatus therefor.	3137	12th Dec. 1863	Joseph Townsend.
Calendering machines - - - - - (*Communicated by Jules Auguste Lequeux Muston.*)	3153	14th Dec. 1863	William Spence.
Certain improvements in apparatus or mechanism for producing a superior finish upon woven fabrics, which is more particularly applicable to those termed "Beaver-teens" or "imperials."	3173	16th Dec. 1863	John Mayo Worrall.
Treating printed and dyed fabrics - - -	3259	24th Dec. 1863	Nathaniel Lloyd. Edwin Hargraves.
An improved teasling machine - - - - (*Communicated by Paul Joseph Vasset, senior.*)	3298	30th Dec. 1863	William Edward Gedge.
See also "DRYING."			
FIRE-ARMS, GUNS, ORDNANCE, GUN-CARRIAGES, TARGETS, RIFLE PRACTICE.			
An improved method of firing or discharging cannon and other fire-arms, a part of which invention is applicable generally to the firing of charges of powder. (*Communicated by George Washington Beardslee and Frederick Edwards Beardslee.*)	30	3rd Jan. 1863	William Edward Newton.
Ordnance - - - - - - - -	51	6th Jan. 1863	Joseph Whitworth. William Wilson Hulse.
Improvements in rocket torpedos and in the apparatus for directing the flight of the same under water. (*Communicated by Rufus Waples and Pascal Plant.*)	52	6th Jan. 1863	John Henry Johnson.
Sights for fire-arms - - - - - - -	82	9th Jan. 1863	George Brooke Price.
Breech-loading fire-arms - - - - -	136	15th Jan. 1863	Charles Murrell.
Breech-loading fire-arms - - - - (*Communicated by Alexander Schmalz.*)	214	23rd Jan. 1863	Edward Thomas Hughes.
Manufacture of gun barrels - - - -	320	4th Feb. 1863	Charles Faulkner. David Faulkner. James Fairley. William Charles Stiff.
Improvements in cannon and in projectiles to be used therewith. (*Partly communicated by Charles Macy.*)	331	6th Feb. 1863	Benjamin Franklin Bates.
An improved boring bench for gun barrels - - (*Communicated by Charles Berger.*)	332	6th Feb. 1863	Alexis Hentzmann. Theodore Anthony Rochussen.
Arrangements employed for the protection of markers at rifle butts.	362	10th Feb. 1863	Thomas Hill.
Improvements in breech-loading fire-arms and in the cartridge cases to be used therewith.	406	14th Feb. 1863	John Henry Walsh.
Construction of breech-loading fire-arms - -	411	14th Feb. 1863	Frank Emsdorff Walker.
Breech-loading fire-arms - - - - (*Communicated by Isaac Hartshorn.*)	446	18th Feb. 1863	George Tomlinson Bousfield.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FIRE-ARMS, &c.—*continued.*			
Apparatus for traversing guns - - - (*Communicated by Joseph Atkinson Yates.*)	447	18th Feb. 1863	Frederic John Reed.
Improvements in fire-arms or in transforming arms of large calibre into arms of smaller calibre.	474	21st Feb. 1863	François Jules Manceaux.
Improvements in ordnance and artillery, and means of operating and mounting the same, and in projectiles and instruments therefor.	484	21st Feb. 1863	Norman Wiard.
Fire-arms - - - - - - - (*Communicated by Alexandre Guerriero.*)	628	5th March 1863	William Clark.
Improved armour plates for vessels, turrets, targets, forts and other structures in which armour plates are or may be used - - - -	655	9th March 1863	William John Clapp. Nathaniel Coats.
Breech-loading fire-arms - - - - (*Communicated by Charles Auguste Cancalon.*)	677	12th March 1863	William Clark.
Discharging projectiles below the water-line of navigable vessels and other structures.	705	16th March 1863	George Parsons Beley.
Improvements in breech-loading fire-arms, part of which improvements are also applicable to other descriptions of fire-arms - - -	750	20th March 1863	Charles Pryse. David Kirkwood.
Fire-arms - - - - - - - - -	787	26th March 1863	Louis Christofleau.
An improved construction of offensive weapon - (*See* "BAYONETS.") (*Communicated by James Cameron Campbell.*)	902	9th April 1863	Alfred Vincent Newton.
Machinery for hammering, rolling and shaping metals. (*Guns.*)	924	13th April 1863	John Ramsbottom.
Apparatus or means for lessening the recoil of cannon.	958	16th April 1863	Stephen Moulton.
Improvements in the manufacture of barrels for fire-arms and other descriptions of tubes, and in apparatus or machinery to be employed for that purpose.	1023	24th April 1863	James Thompson.
Machinery for punching metals - - - (*Barrels for fire-arms.*)	1024	24th April 1863	James Thompson.
Breech-loading fire-arms - - - - (*Communicated by Louis Therasson.*)	1043	25th April 1863	Alfred Vincent Newton.
Ordnance, fire-arms and cartridges - - -	1051	27th April 1863	Westley Richards.
Apparatus for elevating guns - - -	1081	29th April 1863	Henry Worms.
Breech-loading fire-arms - - - - -	1104	2nd May 1863	James Purdey.
Breech-loading fire-arms and ordnance - -	1139	7th May 1863	Jacob Snider, junior.
Construction of "snap caps" or "nipple protectors" for fire-arms.	1187	12th May 1863	Benjamin Lilly.
Brushes, instruments or apparatus employed for painting the centres and bulls'-eyes of military or other targets.	1221	15th May 1863	Douglas Monro Fyfe.
Means or apparatus employed for raising, moving, transporting and refixing military or other targets or mantlets.	1222	15th May 1863	Douglas Monro Fyfe.
Repeating fire-arms - - - - (*Communicated by Oliver Fisher Winchester*)	1223	15th May 1863	William Clark.
Breech-loading fire-arms - - - - (*Communicated by Anthony Pollak.*)	1251	19th May 1863	John Henry Johnson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FIRE-ARMS, &c.—*continued.*			
Improvements in breech-loading fire-arms and in cartridges connected with the same. (*Communicated by Rudolph Mayer.*)	1274	21st May 1863	Edward Thomas Hughes.
Breech-loading ordnance and breech-loading and other small arms. (*Communicated by Lewis Wells Broadwell.*)	1281	21st May 1863	Richard Archibald Brooman.
Improvements in stoppers or bungs for closing or stopping bottles, jars and other vessels and the muzzles of rifles, and for other like purposes. (*Communicated by Ferdinand Krauskopf.*)	1283	22nd May 1863	Charles Maschwitz the younger.
Ordnance - - - - - - -	1284	22nd May 1863	Theophilus Alexander Blakely.
A new method of rifling guns and of forming projectiles to correspond therewith.	1286	22nd May 1863	Theophilus Alexander Blakely.
Offensive and defensive arms - - - (*Communicated by Celestin Dumonthier.*)	1329	27th May 1863	William Clark.
Ordnance - - - - -	1360	30th May 1863	Valentine Baker.
Fire-arms - - - - -	1500	15th June 1863	Patrick Plunkett Leslie Stafford.
Breech-loading fire-arms - - - -	1535	19th June 1863	Robert Marrison.
Improvements in arrow-shaped projectiles and in guns for discharging the same. (*Communicated by Ferdinand Leitenberger.*)	1565	22nd June 1863	William Snell.
Breech-loading arms - - - - (*Communicated by Cosme Garcia Saez.*)	1581	23rd June 1863	Richard Archibald Brooman.
Breech-loading fire-arms - - - -	1585	23rd June 1863	Edgar Brooks.
Construction of guns and projectiles, and of carriages, platforms and shields for working and protecting guns.	1615	27th June 1863	George Clark.
Improvements in ordnance and fire-arms, and in projectiles to be used therewith.	1628	30th June 1863	Alexander Keene Richards.
An improved method of and apparatus for working guns in vessels and forts, and discharging them under water.	1637	1st July 1863	Cowper Phipps Coles.
Breech-loading ordnance and gun carriages -	1653	3rd July 1863	Henry Broadhead. George Murdoch.
Breech-loading fire-arms - - -	1696	8th July 1863	John Gibson. Samuel Trulock. Richard Trulock. William Trulock.
Improvements in working guns and in matters relating thereto.	1703	8th July 1863	Henry Duncan Preston Cunningham.
Certain descriptions of breech-loading fire-arms - (*Communicated by Adolphe Jean Victor Marcet.*)	1752	13th July 1863	Henri Adrien Bonneville.
Sights for rifles and other fire-arms - - -	1755	14th July 1863	Joseph Rock Cooper.
Breech-loading fire-arms - - - -	1782	16th July 1863	Henry Elliott.
Construction of "sights" for fire-arms - -	1805	18th July 1863	Ethelbert Holborow. Isaac Parker.
An improved danger signal to be used on rifle artillery and other practising grounds.	1838	22nd July 1863	Isaac Perrin.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FIRE-ARMS, &c.—*continued.*			
Improvements in expelling solid and liquid refuse matter from steam and sailing ships, below the water line, applicable also for discharging cannon below water from ships and forts, and in part for charging gas retorts and iron furnaces, and for other similar useful purposes. (*Communicated by John Palmer.*)	1843	23rd July 1863	Matthew Augustus Soul.
An improvement in revolving fire-arms (*Communicated by Christian Sharps.*)	1844	23rd July 1863	George Davies.
Fire-arms	1847	23rd July 1863	William Horton.
Manufacture of gun barrels (*Communicated by Maurice Mondon.*)	1859	25th July 1863	Frederick Tolhausen.
Breech-loading and other revolving fire-arms	1862	27th July 1863	William Tranter.
Ordnance, fire-arms and projectiles	1887	30th July 1863	Joseph Bennett Howell.
Improvements in fire-arms and in artillery and projectiles for the same.	1894	31st July 1863	John Coope Haddan.
Improvements in breech-loading fire-arms and in the means of extracting cartridge cases therefrom.	1923	4th Aug. 1863	John Henry Walsh.
An improved revolving battery	1985	11th Aug. 1863	Sir John Scott Lillie.
An improvement or improvements in gun and pistol furniture.	2000	13th Aug. 1863	James Edmunds.
Improvements in artillery and fire-arms, and in projectiles for the same.	2005	13th Aug. 1863	Edward Deane.
Apparatus for working great guns	2016	14th Aug. 1863	Norman Scott Russell.
Breech-loading fire-arms	2081	21st Aug. 1863	Edmond Pope.
A new metallic alloy (*For making cannon.*) (*Communicated by Henri Micolon.*)	2086	22nd Aug. 1863	Richard Archibald Brooman.
Breech-loading fire-arms	2100	25th Aug. 1863	George Edward Lewis. Henry Walker. Joseph Blount Wayne.
Breech-loading fire-arms (*Communicated by Charles Coffey Alger.*)	2120	27th Aug. 1863	William Edward Newton.
Improvements in the construction of ordnance and fire-arms, and in the projectiles to be used therewith.	2121	27th Aug. 1863	George Richards.
Breech-loading fire-arms	2139	29th Aug. 1863	Arthur Agnew.
Breech-loading fire-arms	2147	31st Aug. 1863	Francis Augustus Braendlin.
Improvements in breech-loading and other ordnance, part of which is applicable to the utilizing of old smooth-bore cannon, and in projectiles to be used therewith.	2156	1st Sept. 1863	Jacob Snider, junior.
Improvements in apparatus for stopping bottles, jars and other vessels, which improvements are also applicable for stopping the muzzles of fire-arms.	2223	9th Sept. 1863	Nathan Thompson.
Breech-loading fire-arms	2231	10th Sept. 1863	William Wellington Greener.
Revolving fire-arms	2248	12th Sept. 1863	Charles Edwin Wallis.
Revolving fire-arms (*Communicated by Thomas Jefferson Vail.*)	2250	12th Sept. 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FIRE-ARMS, &c.—*continued.*			
Improvements in the manufacture of iron and steel, and in apparatus to be employed in such manufacture. (*For pistol barrels.*) (*Communicated by William Gerhardt.*)	2293	18th Sept. 1863	George Davies.
Constructing breech-loading ordnance - - (*Communicated by John Gregory.*)	2302	18th Sept. 1863	William Smith.
Improvements in the construction and mode of working ordnance for ships and forts, and in the means of protecting those engaged in working guns employed for such purposes - - (*Communicated by John Gregory.*)	2303	18th Sept. 1863	William Smith.
Breech-loading fire-arms - - -	2313	19th Sept. 1863	John Paul Baugh Le Paturel.
Breech-loading fire-arms - - - -	2380	28th Sept. 1863	John Tertius Harlow. Edmund Harlow.
An improved sight piece for rifles - - - (*Communicated by William Brighton.*)	2399	30th Sept. 1863	Benjamin Browne.
Certain improvements in fire-arms, ordnance and projectiles.	2401	1st Oct. 1863	James Mackay.
Breech-loading fire-arms - - - -	2410	1st Oct. 1863	Thomas Horsley.
Revolver fire-arms - - - - (*Communicated by Stephen Wood.*)	2420	2nd Oct. 1863	George Tomlinson Bousfield.
Breech-loading fire-arms - - - -	2441	6th Oct. 1863	Samuel Mathews.
Breech-loading fire-arms - - - (*Communicated by Samuel Strong.*)	2464	8th Oct. 1863	Caleb Croswell.
Improvements in "camel guns" and other light artillery, which improvements are also applicable to "punt guns" or other heavy fowling pieces or rifles.	2468	8th Oct. 1863	James Dalziel Dougall.
Improvements in throwing projectiles by means of explosive agents and in apparatus therefor.	2508	13th Oct. 1863	John Edgar Poynter.
Means of uniting or joining plates or sheets of metal, which invention is applicable to the construction of boilers, tubes and other useful purposes. (*Cannon.*)	2549	17th Oct. 1863	Edward Henry Cradock Monckton.
Construction of breech-loading fire-arms - -	2554	19th Oct. 1863	William Fletcher.
Ordnance - - - - -	2576	20th Oct. 1863	William Nelson Hutchinson.
An improvement or improvements in breech-loading fire-arms.	2580	21st Oct. 1863	Joseph Hinton.
An improved instrument for lubricating rifles and other descriptions of fire-arms, also ordnance.	2633	24th Oct. 1863	Alexander Sellar.
A new mode of mounting ordnance and the machinery and apparatus composing the same, also the machinery and apparatus for working said ordnance and for loading, cleaning and counteracting its recoil when fired.	2650	27th Oct. 1863	John Charles Wilson.
Treatment and application of steel and homogeneous metal. (*For ordnance.*)	2743	5th Nov. 1863	Joseph Whitworth.
Revolving fire-arms - - - (*Communicated by Benjamin Franklin Joslyn.*)	2768	7th Nov. 1863	Jehiel Keeler Hoyt.
Breech-loading fire-arms and ordnance - - (*Communicated by Jacob Snider, junior.*)	2773	7th Nov. 1863	George Stephen Melland.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FIRE-ARMS, &c.—*continued.*			
Carriages and apparatus for raising, removing and transporting heavy bodies from place to place. (*Targets or mantlets.*)	2825	12th Nov. 1863	Douglas Munro Fyfe.
Improvements in the construction and manufacture of ordnance, parts of which are applicable to small arms.	2876	17th Nov. 1863	Perceval Moses Parsons.
Improvements in breech-loading ordnance and in apparatus connected therewith.	2879	17th Nov. 1863	Valentine Baker.
Improvements in breech-loading fire-arms and in bayonets and cartridges connected with the same.	2883	18th Nov. 1863	Rudolph Mayer.
Improvements in the manufacture of barrels for fire-arms and in machinery to be used in the said manufacture.	2887	18th Nov. 1863	Joseph Rock Cooper.
Connecting scaling, fire and other like ladders -	2923	20th Nov. 1863	George Fawcus.
Fire-arms - - - - - -	2998	30th Nov. 1863	Martin Regul Pilon.
Guns and gun projectiles - - - -	2999	30th Nov. 1863	James Chalmers.
Fuzes and shells for ordnance - - -	3005	1st Dec. 1863	Edward Mounier Boxer.
Improvements in apparatus for mounting and working guns used in ships and other floating vessels, and in fortifications - - - - -	3016	1st Dec. 1863	Edward Augustus Inglefield, F.R.S. & F.R.G.S.
Breech-loading fire-arms - - - -	3072	7th Dec. 1863	Rowland Richards. Samuel Clement Willetts.
Improvements in projectiles for ordnance and in loading and firing ordnance.	3087	8th Dec. 1863	Theophilus Alexander Blakely.
Metallic packings - - - - - (*For breech-loading guns.*)	3088	8th Dec. 1863	Theophilus Alexander Blakely.
An improved war rocket and rocket tube - -	3102	9th Dec. 1863	Thomas Hanmer Fletcher. Robert Forrest.
Fire-arms - - - - - - -	3108	9th Dec. 1863	Neil Kennedy, junior.
Improvements in breech-loading fire-arms, projectiles and cartridges, and in tools or apparatus for the manufacture of projectiles.	3159	14th Dec. 1863	Thomas Wilson.
Manufacture and strengthening of guns, hydraulic press and other cylinders.	3164	15th Dec. 1863	Ludwig Nobel.
Breech-loading fire-arms - - - -	3171	16th Dec. 1863	Joseph Smith.
Construction of cannon and other ordnance -	3179	16th Dec. 1863	Theophilus Alexander Blakely.
Breech-loading fire-arms - - - -	3185	17th Dec. 1863	Robert Marrison.
Improvements in the construction of ordnance and in projectiles to be used therewith.	3192	18th Dec. 1863	Peter Gardner.
Ordnance, fire-arms and projectiles - -	3194	18th Dec. 1863	Percival Moses Parsons.
Percussion fuzes for igniting the charges of explosive projectiles, mines, torpedoes and other charges of gunpowder or other explosive or easily inflammable substances or compounds. (*Communicated by John Jordon Eckel.*)	3250	23rd Dec. 1863	William Clark.
Breech-loading fire-arms - - - - (*Communicated by Philo Remington, Samuel Remington and Eliphalet Remington.*)	3253	23rd Dec. 1863	William Edward Newton.
Mode of igniting explosive projectiles - -	3258	24th Dec. 1863	Andrew Noble.
Improvements in breech-loading fire-arms and ordnance, and in apparatus for loading the same.	3275	28th Dec. 1863	Edward Lindner.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FIRE-ARMS, &c.—*continued.*			
Breech-loading fire-arms - - - - -	3308	31st Dec. 1863	Aungeir Byrnes. Henry Benjamin.
Mounting and serving guns used upon vessels and fortifications.	3309	31st Dec. 1863	James Radley.
For Ammunition—*see* "CARTRIDGES." " "GUNPOWDER." " "SHOT."			
FIRE-ENGINES; FIRE-ESCAPES; EXTINGUISHING FIRES.			
Improved arrangements for portable fire-escapes -	7	1st Jan. 1863	Joshua Joseph Southgate.
Apparatus for saving life and property from fire and other danger in buildings and mines.	113	13th Jan. 1863	John Boyle Rock.
Obtaining and applying motive-power. (*To work fire-engines.*)	356	9th Feb. 1863	John Macintosh.
Improvements in obtaining and applying motive-power, which improvements or parts thereof are applicable for raising, forcing and measuring fluids. (*Pumps for fire-engines.*)	512	24th Feb. 1863	Robert William Thomson.
Fire-escapes - - - - - -	823	30th March 1863	James Payne.
Improvements in indicating the locality of fire, applicable also to denoting the position of ships.	1055	27th April 1863	William Henry James.
Improvements in the construction of garden pumps, part of which said improvements are applicable to fire-engines and other hydraulic machines.	1107	2nd May 1863	John Thomas Oakley. Thomas Oakley.
An improved apparatus for saving from destruction by fire persons and property in houses, buildings and ships, and also for ventilating ships. (*Communicated by James Partridge.*)	1256	19th May 1863	Abraham Parker.
Steam fire-engines - - - - - (*Communicated by Joseph Garnett Larned.*)	1388	3rd June 1863	Wellington Lee. John Gano Winter.
Improvements in steam fire-engines, parts of which improvements are applicable to steam-boilers and to pumps generally.	1474	12th June 1863	Henry Stracey Barron.
Improvements in the arrangement and construction of steam fire-engines and in steam-boilers for the same, such boilers being applicable to other purposes.	1490	13th June 1863	James Shand.
Improvements in apparatus for extinguishing chimney fires and in preventing explosions.	1842	23rd July 1863	Louis Laurent Jacques Fillion.
An improved method of annihilating or extinguishing fires.	1869	28th July 1863	Roger Dawson.
A new or improved instrument or apparatus for extinguishing fires.	1961	8th Aug. 1863	William Burnet Robins.
Improvements in steam-boilers and in apparatus connected therewith. (*Extinguishing the fire.*)	2130	28th Aug. 1863	Joseph Walls.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FIRE-ENGINES, &c.—*continued.*			
Improved arrangements for removing the fuel from stoves or grates and for facilitating the extinguishing of the fires used therein.	2149	31st Aug. 1863	Benjamin Lile Burnett.
Valves, taps or cocks - - - - -	2170	2nd Sept. 1863	Charles Harvey Corlett.
Portable fire and garden engines - - -	2321	21st Sept. 1863	William Burnet Robins.
An improved method of extinguishing fires in chimneys and flues, regulating and promoting draught therein, calculated also to act as a ventilator.	2481	9th Oct. 1863	Noah Fellows.
Improvements in machinery for raising and forcing fluids, parts of which improvements are also applicable to steam-engines, blast-engines, exhausters and other machines. (*Fire-engines.*)	2707	31st Oct. 1863	Stephen Holman.
Connecting scaling, fire and other like ladders -	2923	20th Nov. 1863	George Fawcus.
Fire-escapes - - - - - -	2965	25th Nov. 1863	Matthew Power.
FIRE-PLACES, GRATES AND STOVES; FENDERS AND FIRE GUARDS.			
Apparatus for burning oils and other inflammable fluids as fuel. (*Communicated by Augustus Theodore Schmidt.*)	13	2nd Jan. 1863	Frederick Collier Bakewell.
Apparatus for steaming, cooking and generating gas - - - - - - -	248	28th Jan. 1863	John Oglesby. John Dickinson. William Mark Dickinson. John Dickinson the younger.
Apparatus for heating and warming - - -	273	29th Jan. 1863	Gideon Blake.
An improved hot air stove where peat charcoal is the fuel employed, and for the method of using peat charcoal or other suitable fuel in connection with the said stove or other stoves, for the purpose of purifying or filtering the gaseous products of combustion.	315	4th Feb. 1863	Joseph Judge Hays.
An improved hot air stove - - - - - -	368	11th Feb. 1863	Alfred Corneau.
Stoves or fire-places for warming apartments -	436	17th Feb. 1863	Henry Tomlinson.
An improved grate whereby the perfect combustion of the various compounds of coal is produced.	439	18th Feb. 1863	George Kennedy Geyelin.
Cooking stoves - - - - - -	443	18th Feb. 1863	John Henry Bly.
The manufacture of a new or improved fabric and its application to the formation of ornaments for fire-stoves and other decorative purposes.	583	2nd March 1863	Thomas Taylor.
An improved stove or fire-grate for heating, cooking, boiling or other similar purposes.	702	16th March 1863	Felix Hoyos.
A new combined range for making gas, cooking by gas and lighting, especially applicable for ships.	762	23rd March 1863	Henry Hancock.
Apparatus for lighting and heating - -	764	23rd March 1863	William Johnston.
Improvements in furnaces and fire-places having for object the consumption or prevention of smoke.	850	2nd April 1863	Jerome Jean Potêl.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FIRE-PLACES, &c.—*continued.*			
Chimneys, fire-places, stoves and flues for warming and ventilating apartments - - - - -	1296	23rd May 1863	Samuel Egan Rosser. Josiah George Jennings.
An improved method of accelerating the draft in furnaces and fire-places.	1351	29th May 1863	Jerome Jean Potêl.
A new method of connecting several fire-places with one chimney.	1548	20th June 1863	Philip Fassio.
Cooking ranges - - - - - -	1779	16th July 1863	Andrew Watson.
Machines for the preparation of moulds for casting (*Stove fronts, fender standards, &c.*)	1990	12th Aug. 1863	Richard Canham.
Stoves or grates - - - - - - -	2111	26th Aug. 1863	John Platt. William Richardson.
Improved arrangements for removing the fuel from stoves or grates, and for facilitating the extinguishing of the fires used therein.	2149	31st Aug. 1863	Benjamin Lile Burnett.
Improved means of and apparatus for employing vapours, gases and the heat derived from combustible matters.	2241	11th Sept. 1863	Louis Meyer.
Stove grates and kitchen ranges - - -	2244	11th Sept. 1863	Henry Chrichley.
Construction and application of apparatus and implements used for the purpose of heating, cooling and evaporating.	2253	14th Sept. 1863	Henry Riviere.
Improvements in furnaces and fire-places applicable to the heating of steam-boilers and other purposes.	2375	26th Sept. 1863	Edward Brown Wilson.
Improved apparatus for heating by means of illuminating gas. (*Communicated by Paulin Amédé Charpentier.*)	2381	28th Sept. 1863	William Edward Gedge.
Cooking stoves and apparatus - - - - -	2404	1st Oct. 1863	Louis Napoleon Legras.
Lamps and stoves for the application of blast heat to horticultural, agricultural and other specified purposes.	2535	16th Oct. 1863	Frederick George Stuber.
Ventilators and fire guards - - - - - -	2712	2nd Nov. 1863	Thomas Fitzgerald Wintour.
Hot air stoves - - - - - -	2919	20th Nov. 1863.	Joseph Judge Hays.
Apparatus for lighting and heating - - (*Communicated by Bernard Subra.*)	3015	1st Dec. 1863	William Clark.
An improved apparatus for causing a stronger and better draught or current of air, so that house fires may be lighted or kindled in a very short space of time, for effecting a very considerable saving in fuel, and for throwing the heat from such fire into the building or room.	3024	2nd Dec. 1863	Thomas Snook.
Improvements in gas stoves for heating irons and other purposes, and in the construction of irons to be heated and used therewith.	3042	3rd Dec. 1863	David Hulett.
A combined hot water and hot air stove - -	3048	4th Dec. 1863	John Corbett.
Furnaces, fire-grates and fire-bars - - -	3105	9th Dec. 1863	Joseph Wright.
A new method of decorating or ornamenting register or other grate fronts and cheeks, hearths of fire-places, fenders and the exterior surfaces of hot air stoves, and coil cases enclosing hot water, or steam pipes.	3278	28th Dec. 1863	William Wilson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FISHING; FISHING NETS AND LINES; COLLECTING OYSTER BROOD.			
Improvements in fishing and in the apparatus or means to be employed therein. (*Communicated by John d'Atouquia de Franca Netto.*)	1751	13th July 1863	Pierre Charles Alexandre Iodocius.
Means or apparatus for facilitating the catching of fish.	1871	28th July 1863	Alexander Hector.
An improved thread for fishing nets - - (*Communicated by David Alexandre Aguitton.*)	2298	18th Sept. 1863	Richard Archibald Brooman.
Means of and apparatus for paralysing, capturing or killing fish, birds and other animals.	2644	26th Oct. 1863	Isham Baggs.
The collection and cultivation of oyster spawn and brood. (*Communicated by Eugene Kemmerer.*)	2930	21st Nov. 1863	Hubert Ayckbourn.
FLUES AND CHIMNEYS; CHIMNEY TOPS; CURING SMOKY CHIMNEYS; CHIMNEY WIND GUARDS.			
Apparatus for curing smoky chimneys - - -	28	3rd Jan. 1863	Charles Butler Clough.
Improvements in the manufacture and treatment of malleable iron and steel, and in furnaces, machinery and apparatus employed in such manufacture.	114	13th Jan. 1863	Henry Bessemer.
Improvements in apparatus for sweeping or cleaning chimneys, and also in apparatus for preventing chimneys from smoking.	124	14th Jan. 1863	George Holt.
Improvements in the treatment of organic fecal and urinous matters for the purpose of deodorizing the same, and in the preparation of a portable manure therefrom, and in the treatment of ashes or other refuse of combustion to be combined therewith, also for improvements in machinery to be employed in the manufacture of the said manure. (*Hot air flues.*)	132	15th Jan. 1863	John Harrop.
Improved apparatus for cleansing chimneys or other flues. (*Communicated by Eutrope Malavergne.*)	278	30th Jan. 1863	William Edward Gedge.
Chimney tops - - - - - -	432	17th Feb. 1863	James Durrant.
Improvements in steam-boilers and in the arrangement of flues in connection therewith.	564	28th Feb. 1863	William Hadfield.
Apparatus for the purpose of clearing out the interior of foul chimneys or flues when on fire or otherwise - - - - - -	740	19th March 1863	Charles Webster. William Forgie.
Steam-boilers - - - - - -	882	8th April 1863	George Hill. William Ridings Hill.
Steam-boilers and apparatus connected therewith -	1006	22nd April 1863	Gill Bridges Barber.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FLUES, &c.— *continued.*			
Certain improvements in apparatus for heating water in furnaces, flues and chimneys - -	1019	24th April 1863	John Knowles. Samuel Jackson.
Construction of steam-boilers for marine, locomotive and stationary engines - -	1243	18th May 1863	Alfred Heather. John Redfern.
Improvements in coke ovens, and in building and heating ovens or retorts for generating coal gas connected therewith.	1287	22nd May 1863	George Stevens.
Chimneys, fire-places, stoves and flues for warming and ventilating apartments - - -	1296	23rd May 1863	Samuel Egan Rosser. Josiah George Jennings.
Improvements in steam-boilers and furnaces for the consumption of smoke.	1394	4th June 1863	Hugh Rigby.
A new method of connecting several fire-places with one chimney.	1548	20th June 1863	Philip Fassio.
Using Apo-elastikon hyphrasma as a new and improved cloth for floors, roofs, walls, tanks and other linings, being impervious to damp and of great strength and durability. (*For flashings round chimneys.*)	1603	25th June 1863	William Kirrage.
Apparatus for attaching to steam-boilers and flues for the consumption of smoke.	2042	17th Aug. 1863	Thomas Loftus.
Improvements in chimney tops, which improvements are also applicable to coverings for ventilating shafts or flues for mines and other places.	2049	18th Aug. 1863	Thomas Dobb.
Locomotive or other steam-engines - - (*Improving the draft in the funnel.*)	2263	15th Sept. 1863	Andrew Barclay.
Improvements in steam-engines and in furnaces and boilers for the same.	2437	5th Oct. 1863	Thomas Ivory.
Steam-boilers and furnaces - - - (*Communicated by Johann Christian Carsten Meyn.*)	2444	6th Oct. 1863	Richard Archibald Brooman.
An improved method of extinguishing fires in chimneys and flues, regulating and promoting draught therein, calculated also to act as a ventilator.	2481	9th Oct. 1863	Noah Fellows.
Improved apparatus for cleaning out the tubes of steam-boilers, which apparatus is also applicable for cleaning out other tubes.	2500	12th Oct. 1863	Thomas Fox.
Improvements in the construction of iron and other ships, vessels and batteries of war, and of cupolas and armour plates applicable thereto, parts of which improvements are also applicable to other useful purposes. (*Funnels.*)	2690	30th Oct. 1863	Barnabas Russ.
An improved cowl or chimney-pot - - (*Communicated by Yves Marie Pouliquen.*)	2792	10th Nov. 1863	Henri Adrien Bonneville.
Certain improvements in steam-boilers or generators.	2890	18th Nov. 1863	John Stewart.
Improved apparatus for curing smoky chimneys and preventing down draughts therein.	3026	2nd Dec. 1863	Jasper Capper.
Apparatus for regulating the passage of aëriform and other fluids. (*Draft in furnace chimneys.*) (*Communicated by Charles Joseph Louis Meynard.*)	3096	8th Dec. 1863	Michael Henry.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FLUES, &c.—*continued.*			
Improvements in the arrangement of furnaces, flues and kilns for drying and burning bricks, tiles and other articles, and in the application of the heat from the kilns to boilers for generating steam.	3266	24th Dec. 1863	James Duckett.
Improvements applicable to steam-boilers for economising fuel.	3274	28th Dec. 1863	Thomas Hall.
FOOD FOR CATTLE, DOGS AND POULTRY; CHAFF CUTTING; ROOT PULPING; FEEDING TROUGHS.			
Machines for pulping turnips and other vegetable substances.	120	14th Jan. 1863	George Arthur Biddell.
Feeding troughs for sheep and other cattle - -	275	29th Jan. 1863	John Sainty.
Apparatus for feeding horses - - - (*See* "STABLES.")	419	16th Feb. 1863	Hugh Smith.
A new kind of food for horses - - -	435	17th Feb. 1863	Stanilas Pluchart.
Preparation of cotton seed cake - - -	456	19th Feb. 1863	Jean Joseph Badart.
Portable chaff cutting machines - - -	518	25th Feb. 1863	Robert Maynard.
Improvements in treating seaweed and in apparatus therefor. (*As food for cattle.*)	607	4th March 1863	Edward Alfred Wünsch.
Construction of machinery or apparatus for cutting chaff and other agricultural produce - -	927	13th April 1863	Robert Leggett. Robert Gittus.
Preparation of rape seed cake, linseed cake, poppy seed cake, niger seed cake, sesseme seed cake and ground nut cake.	1099	1st May 1863	Joseph Badart.
Machinery or mills for crushing or reducing oil cake, seeds and other substances. (*Communicated by Samuel Hebblewhite.*)	1244	18th May 1863	Benjamin Hebblewhite.
Preparation of food for cattle, horses and other animals.	1279	21st May 1863	John Fawcett.
An improved turnip cutter for cutting the last slice.	1561	22nd June 1863	John Sainty.
Machinery applicable to thrashing machines and for cutting and bruising straw - - -	1607	25th June 1863	John Head. Henry Brinsmead.
Construction of feeding troughs for sheep and other cattle.	1876	29th July 1863	John Sainty.
Improvements in the manufacture or production of food for cattle and all other domestic animals, poultry and game, and in the machinery or apparatus employed therein.	2050	18th Aug. 1863	Alexander Cruickshank.
Machines for cutting or reducing turnips or other roots as food for animals.	2124	28th Aug. 1863	John Shaw.
Hydraulic apparatus - - (*For compressing fodder.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Certain improvements in machinery or apparatus for cutting hay, straw or other similar agricultural produce. (*Communicated by Heinrich Pollack.*)	2199	7th Sept. 1863	Nathan Sington.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FOOD FOR CATTLE, &c.—*continued.*			
Certain improvements in the expression of oil from oil yielding substances, and in the production of oil cake and other residuary matters.	2648	27th Oct. 1863	John Marshall.
Machines for cutting chaff and such like substances.	2730	4th Nov. 1863	Abram Gillett.
Means or apparatus for effecting the chopping or separation of animal and vegetable substances.	2832	13th Nov. 1863	William Francis Dearlove.
Chaff cutting machinery - - - -	2993	28th Nov. 1863	Thomas Lane.
Improvements in obtaining purified or refined oils, and in obtaining oil cakes from cotton seed and other vegetable substances, also in refining or purifying cod liver oil - - -	3114	10th Dec. 1863	John Anthony Pols. Peter Owen Bernard.
An improved preparation of food for cattle - -	3174	16th Dec. 1863	John Sellars.
An improved turnip cutter for cutting the last slice.	3234	22nd Dec. 1863	John Sainty.
FORTIFICATIONS, BATTERIES, SHIPS OF WAR, GUN-BOATS, ARMOUR PLATED SHIPS; ESCALADING APPARATUS			
Battery plates - - - - - -	2	1st Jan. 1863	William Henry Brown.
Armour-plated and other ships - - -	299	2nd Feb. 1863	William Clark.
Mode of uniting metallic surfaces - - - (*Sheathing armour plated ships.*) (*Communicated by William Brainerd Barnard.*)	313	4th Feb. 1863	George Haseltine.
Construction of iron ships or vessels and of armour applicable thereto.	319	4th Feb. 1863	Barnabas Russ.
Armour plating or protecting ships and vessels -	466	20th Feb. 1863	Richard Bell.
Manufacture of armour plates for ships and other structures. (*Communicated by Alexander Holley.*)	481	21st Feb. 1863	John Brown.
Construction and arrangement of armour plates for ships.	497	24th Feb. 1863	Daniel Spink.
Construction of war and merchant ships - -	508	24th Feb. 1863	Hugh Bowlsby Willson.
Manufacture of armour plates or blocks for defensive purposes.	542	26th Feb. 1863	James Yates.
An improved mode of applying and fastening metal sheathing to the bottoms of iron ships or vessels, and to iron for other uses - - - (*To iron for fortifications.*)	602	4th March 1863	Charles Mark Palmer. John M^{c}Intyre.
Improvements in manufacturing curvated armour plates and other iron work, and in machinery or apparatus employed therein.	614	4th March 1863	William Littell Tizard.
Machinery for the manufacture of nails - - (*Sheathing nails.*)	615	5th March 1863	William Whittle.
Improved armour plates for vessels, turrets, targets, forts and other structures in which armour plates are or may be used - - - -	655	9th March 1863	William John Clapp. Nathaniel Coats.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FORTIFICATIONS, &c.—*continued.*			
Machinery for rolling armour plates, bridge plates, boat plates, and other plates and bars of iron -	681	13th March 1863	John Harris. Joseph Butler. John Henry Fraser.
Discharging projectiles below the water line of navigable vessels and other structures.	705	16th March 1863	George Parsons Beley.
An improved mode of constructing the armour of vessels of war - - - - -	829	31st March 1863	Archibald Hamilton Bell. Valentine Græme Bell.
Protecting vessels of war and fortifications from the effects of projectiles.	848	2nd April 1863	Douglas Symonds Sutherland.
Improvements in the construction of ships or vessels, part of which improvements are also applicable for constructing buildings, and for various other purposes in which rolled iron is employed. (*Floating batteries.*)	851	2nd April 1863	William Jones.
Improvements in the construction of vessels of war, part of which improvements is applicable to fortifications.	914	10th April 1863	Henry Caudwell.
Improvements in apparatus for manufacturing beton and artificial stone, pugging clay and other similar purposes, and in the production of artificial stone, and artistic, ornamental and decorative articles, works and surfaces. (*For fortifications.*) (*Communicated by François Coignet.*)	1086	29th April 1863	Michael Henry.
Improvements in welding and rolling metals, and in machinery connected therewith. (*Armour plates.*) (*Communicated by Michel Helson.*)	1091	30th April 1863	Edward Griffith Brewer.
Manufacture of sheets, slabs and other articles when fibrous materials are employed. (*For resisting shot and shell.*)	1158	8th May 1863	Charles Frederick Bielefeld.
Improvements applicable to the defending of ships or vessels and forts when armour plating is employed.	1171	9th May 1863	John Bland Wood.
Armour plates of hammered or rolled wrought iron, the whole of the rivets being protected against the direct blows from the cannon shots.	1181	11th May 1863	Charles Louis Van Tenac.
Manufacture of thick plates of wrought iron for armour plates and other purposes - -	1203	13th May 1863	James Edward M'Connell. George Hinton Bovill.
Armour for forts and floating batteries - -	1364	1st June 1863	James Chalmers.
Improvements in constructing the sides of ships, batteries and fortifications, and in applying armour plates thereto.	1460	11th June 1863	Edwin Owen Hallett.
Construction of guns and projectiles, and of carriages, platforms and shields for working and protecting guns.	1615	27th June 1863	George Clark.
An improved method of and apparatus for working guns in vessels and forts, and discharging them under water.	1637	1st July 1863	Cowper Phipps Coles.
Improvements in working guns and in matters relating thereto - - - - -	1703	8th July 1863	Henry Duncan Preston Cunningham.
Improvements in expelling solid and liquid refuse matter from steam and sailing ships, below the water line, applicable also for discharging cannon below water from ships and forts, and in part for charging gas retorts and iron furnaces, and for other similar useful purposes. (*Communicated by John Palmer.*)	1843	23rd July 1863	Matthew Augustus Soul.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FORTIFICATIONS, &c.—*continued.*			
Improvements in the construction and protection of ships, vessels and floating batteries, and in the preparation and arrangement of materials for those purposes, some of such improvements being applicable to the construction and protection of land fortifications.	1929	5th Aug. 1863	George Clark.
An improved revolving battery.	1985	11th Aug. 1863	Sir John Scott Lillie.
Improvements in the manufacture and fitting or securing of armour plates, blocks or bars, and in the machinery or apparatus employed therein, parts of which improvements are applicable to heavy forgings generally.	2051	18th Aug. 1863	James Yates.
Machinery for planing curved, curvilinear, irregular and other forms in iron, steel and other metals. (*Ships' armour plates.*)	2077	21st Aug. 1863	Robert Thompson.
Construction of military bridges, piers, landing stages and escalading apparatus.	2096	24th Aug. 1863	Frederick Rice Stack.
Machinery for planing or cutting off the sides of armour plates.	2264	16th Sept. 1863	Joseph Fox.
Improvements in the construction and mode of working ordnance for ships and forts, and in the means of protecting those engaged in working guns employed for such purposes. (*Communicated by John Gregory.*)	2303	18th Sept. 1863	William Smith.
Vessels of war.	2611	23rd Oct. 1863	Jürgen Lorenz Jürgens.
Improvements in the construction of ships of war and other vessels, and in masting or rigging the same.	2673	28th Oct. 1863	John Kennedy.
Improvements in the construction of iron and other ships, vessels and batteries of war, and of cupolas and armour plates applicable thereto, parts of which improvements are also applicable to other useful purposes.	2690	30th Oct. 1863	Barnabas Russ.
Machinery for cutting and planing iron and other metals, particularly applicable to machinery for cutting and planing armour plates - -	2735	5th Nov. 1863	Greenwood Craven. William Craven. John Craven.
Construction of armour for ships of war and land batteries.	2848	14th Nov. 1863	Thomas Symes Prideaux.
Ships or vessels for war and other purposes - -	2895	18th Nov. 1863	Patrick St. George Græme.
Construction of gun boats, gun vessels and rams -	2922	20th Nov. 1863	Alexander M'Laine.
Improvements in ships of war and in arming ships of war.	2995	30th Nov. 1863	Augusto Albini.
Sheathing iron vessels and armour plated ships -	3014	1st Dec. 1863	Robert Turnbull.
Improvements in apparatus for mounting and working guns used in ships and other floating vessels, and in fortifications.	3016	1st Dec. 1863	Edward Augustus Inglefield.
Construction of ships of war and other vessels -	3036	2nd Dec. 1863	Charles Lungley.
Certain improvements in port closers for vessels of war and forts. (*Communicated by William Stuart Auchincloss.*)	3115	10th Dec. 1863	William Clark.
Construction of shot-proof iron or steel walls suitable for the sides of war ships, floating batteries or forts.	3202	19th Dec. 1863	Robert Legg.
Construction of batteries for ships, forts and other defences.	3249	23rd Dec. 1863	John Mathew.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FORTIFICATIONS, &c.—*continued.*			
Improvements in the construction of ships and vessels of war (also applicable to other ships and vessels) and in batteries and fortifications.	3281	28th Dec. 1863	Thomas Tozer.
Constructing and arming ships and floating batteries.	3293	29th Dec. 1863	William Michael Peniston.
Mounting and serving guns used upon vessels and fortifications.	3309	31st Dec. 1863	James Radley.
FUEL; TREATING COAL; PREPARING FIRE-WOOD; FIRE-LIGHTERS.			
Apparatus for burning oils and other inflammable fluids as fuel. (*Communicated by Augustus Theodore Schmidt.*)	13	2nd Jan. 1863	Frederick Collier Bakewell.
Improvements in the construction and mode of working apparatus to be employed in pressing, moulding, shaping, embossing, crushing, shearing and cutting metallic and other substances. (*Moulding artificial fuel.*)	37	5th Jan. 1863	Henry Bessemer.
An improved hot air stove where peat charcoal is the fuel employed, and for the method of using peat charcoal or other suitable fuel in connection with the said stove or other stoves, for the purpose of purifying or filtering the gaseous products of combustion. (*See* "FIRE-PLACES.")	315	4th Feb. 1863	Joseph Judge Hays.
Construction of fire-lighters or faggots - -	338	6th Feb. 1863	William Robins.
Obtaining and applying motive-power - - (*Oxygenous fuel.*)	356	9th Feb. 1863	John Macintosh.
Improvements in machinery for digging, compressing and moulding peat or turf, and for retorts and kilns for drying peat or turf, and making peat or turf charcoal, through the agency of hydro-caloric or superheated steam, and for collecting the products of distillation whilst charring the peat or turf.	528	25th Feb. 1863	Thomas Vincent Lee.
Machinery for pressing peat - - - (*Communicated by Christian Augustus Erich.*)	597	3rd March 1863	Theodor Erich.
Improvements in treating seaweed and in apparatus therefor. (*And using as fuel.*)	607	4th March 1863	Edward Alfred Wünsch.
Apparatus connected with machinery used in manufacturing compressed fuel.	801	27th March 1863	John Grantham.
Improved machinery or apparatus for drying coal, grain and other substances.	857	4th April 1863	Prosper Hanrez.
Manufacture of artificial fuel and cement - -	928	13th April 1863	James Lark.
Improvements in the preparation or treatment of peat or turf, and the manufacture thereof into charcoal and other fuel, drain pipes, building and other tiles, and in apparatus used therein.	1255	19th May 1863	John Kelly.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FUEL, &c.—*continued.*			
Improvements in metal screens and sieves for screening and sifting, applicable also to other openwork articles. (*Coal sifting.*)	1540	19th June 1863	William Hicklin.
An improved mode of and apparatus for treating or preparing megass and other substances to be used as fuel.	1659	3rd July 1863	Hamilton Shirley Warner.
Manufacture or production of artificial fuel -	1991	12th Aug. 1863	James Templeman.
An improved artificial fuel - - -	2079	21st Aug. 1863	William Evans.
Machinery for pressing peat - - - (*Communicated by Christian Augustus Erich.*)	2163	1st Sept. 1863	Theodor Erich.
An improved method of compounding by agglomeration artificial fuel - - -	2334	22nd Sept. 1863	Gustave Maillard de Bayelt. Joseph Emile Vigouléte.
Improvements in and apparatus for washing, cleaning and separating impurities from small coal, coke, ashes or cinders.	2901	19th Nov. 1863	Isaac Francis.
An improvement in yarn strings for tying up firewood.	2938	21st Nov. 1863	Thomas Humphreys.
See also "CHARCOAL."			
FULLING AND FELTING; FELTED FABRICS; FLOCK, WADDING.			
Manufacture of felted fabrics - - -	213	23rd Jan. 1863	Cornelius Turner.
Manufacture of felted fabrics - - - -	970	17th April 1863	Cornelius Turner.
Improved apparatus for fulling woollen cloths and washing and cleansing woven fabrics.	1097	1st May 1863	William Clissold.
Manufacture of sheets, slabs and other articles when fibrous materials are employed. (*Felt.*)	1158	8th May 1863	Charles Frederick Bielefeld.
An improved dryer fabric for paper making - - (*Felt.*)	1167	9th May 1863	William Boaler.
Manufacture of waterproof fabrics - - - (*Communicated by John Foster Greene.*)	1288	22nd May 1863	William Edward Newton.
Improved machinery for the manufacture of waterproof fabrics. (*Communicated by John Foster Greene.*)	1289	22nd May 1863	William Edward Newton.
Improvements in the manufacture (by the introduction of cocoa nut husk or part thereof) of a substitute for ordinary felt and kamptulicon, and in utilizing said cocoa nut husk or part thereof for packing of wine coolers, refrigerators and ice chests, and caulking of ships and vessels.	1423	8th June 1863	Henry Reynell.
Figuring, ornamenting and coloring fulled and felted fabrics and articles. (*Communicated by the Société Troty Latouche, frères.*)	1773	15th July 1863	Michael Henry.
Improvements in fulling, thickening, felting and cleansing cloths, and in apparatus connected therewith.	1918	4th Aug. 1863	Charles Gouty.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FULLING, &c.—*continued.*			
Improvements in the manufacture of wadding, paper and felted fabrics, and in the preparation of vegetable fibres to be used in such manufactures.	2164	1st Sept. 1863	George Whiffen Ewens.
Manufacture of felted fabrics - - -	2235	10th Sept. 1863	James Heywood Whitehead.
An improved fabric for the production of permanent electricity applicable for wearing apparel. (*Woven or felted.*) (*Communicated by Théodore Courant.*)	2370	26th Sept. 1863	William Clark.
Machinery employed in the manufacture of wool and hair felting. (*Communicated by Jesse Albert Locke.*)	2697	31st Oct. 1863	Henry Bernoulli Barlow.
Improvements in machinery for finishing or beetling woven fabrics, which improvements are also applicable to fulling machines.	2799	11th Nov. 1863	John Smith.
An improved preparation for the treatment of flock and other furniture padding to render the same obnoxious to vermin.	3097	8th Dec. 1863	James Tod.
Fulling machinery - - - - - (*Communicated by Thomas Mayall.*)	3149	12th Dec. 1863	George Tomlinson Bousfield.
FURNACES AND FIRE-BOXES; SUPPLYING FURNACES WITH FUEL.			
Apparatus for burning oils and other inflammable fluids as fuel. (*Communicated by Augustus Theodore Schmidt.*)	13	2nd Jan. 1863	Frederick Collier Bakewell.
Furnaces - - - - - - (*Communicated by Hyppolite Godard Desmarest.*)	84	9th Jan. 1863	Michael Henry.
Improvements in the manufacture and treatment of malleable iron and steel, and in furnaces, machinery and apparatus employed in such manufacture.	114	13th Jan. 1863	Henry Bessemer.
Manufacture of chlorine and bleaching powder, carbonate of soda and soda ash, and sulphate of iron. (*Forming furnace hearths.*) (*Communicated by Thomas Macfarlane.*)	126	14th Jan. 1863	William Johnson.
Improvements in the treatment of organic fecal and urinous matters for the purpose of deodorizing the same, and in the preparation of a portable manure therefrom, and in the treatment of ashes or other refuse of combustion to be combined therewith, also for improvements in machinery to be employed in the manufacture of the said manure. (*Arrangement of furnace.*)	132	15th Jan. 1863	John Harrop.
Hot air engines - - - - - (*Communicated by Elmer Townsend.*)	155	17th Jan. 1863	George Tomlinson Bousfield.
Heating arrangements of stoves for drying woven fabrics.	244	28th Jan. 1863	Horatio Watson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FURNACES, &c.—*continued.*			
Manufacture of iron - - - - -	1513	17th June 1863	William Henry Dawes.
Furnaces for boilers, smelting and other useful purposes.	1760	14th July 1863	James Davison.
Means of and apparatus for heating, melting, boiling, evaporating and other useful purposes.	1824	21st July 1863	Charles Stewart Duncan.
Improvements in expelling solid and liquid refuse matter from steam and sailing ships, below the water line, applicable also for discharging cannon below water from ships and forts, and in part for charging gas retorts and iron furnaces, and for other similar useful purposes. (*Communicated by John Palmer.*)	1843	23rd July 1863	Matthew Augustus Soul.
An improved fire-proof cement which may be employed for covering walls, ceilings and floors, and is also applicable in the manufacture of fire bricks, crucibles, retorts, melting pots, and for other purposes where fire resisting properties are required. (*For lining furnaces.*)	1906	1st Aug. 1863	Richard Edwin Bibby.
Furnaces for heating air, steam, and other elastic fluids.	1928	5th Aug. 1863	Edward Alfred Cowper.
Improved apparatus for generating heat for smelting and other purposes. (*Forming hot blast.*)	1946	6th Aug. 1863	John Kirkham.
Certain improvements in steam-boilers - -	1949	7th Aug. 1863	William Jones.
Fans, pumps and machinery for propelling air, fluids or other substances by centrifugal force. (*For blast furnaces.*)	2008	14th Aug. 1863	Christian Schiele.
Blast furnaces - - - - - -	2012	14th Aug. 1863	Edward Brown Wilson.
Furnaces for heating, flattening and annealing glass (*Communicated by Andrew Kesler Hay.*)	2022	15th Aug. 1863	George Davies.
Apparatus for attaching to steam-boilers and flues for the consumption of smoke.	2042	17th Aug. 1863	Thomas Loftus.
An improved construction of fire-bars and apparatus connected therewith.	2047	18th Aug. 1863	John Brennand.
Improvements in or applicable to the furnaces of steam-boilers - - - - -	2137	29th Aug. 1863	William Whitworth. Joseph Wrigley.
Furnaces - - - - - - (*For steam-boilers.*)	2185	4th Sept. 1863	John Hendry. William Coutts.
Furnace fire-grates - - - -	2206	8th Sept. 1863	William Ashley Wilson. James Smith.
Steam-boiler and other furnaces - - -	2221	9th Sept. 1863	John Robinson.
Improved means of and apparatus for employing vapours, gases and the heat derived from combustible matters.	2241	11th Sept. 1863	Louis Meyer.
An improved construction of furnace for roasting pyrites.	2245	11th Sept. 1863	Moritz Gerstenhöfer.
An improved method of and apparatus for consuming smoke and heating and warming public and other buildings, and for drying purposes generally.	2266	16th Sept. 1863	Gabriel Lewal.
A new or improved combined coke oven and hot blast oven or apparatus. (*Blast for furnaces.*)	2277	17th Sept. 1863	James M'Ewen.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FURNACES, &c.—*continued.*			
Improvements in the manufacture of iron and steel, and in apparatus to be employed in such manufacture. (*Communicated by William Gerhardt.*)	2293	18th Sept. 1863	George Davies.
Improvements in furnaces for heating wheel hoops, applicable also for other similar purposes.	2355	24th Sept. 1863	Amos Firth.
Improvements in furnaces and fire-places applicable to the heating of steam-boilers and other purposes.	2375	26th Sept. 1863	Edward Brown Wilson.
Improvements in the construction of steam-boilers and in their fire-grates.	2377	28th Sept. 1863	Louis Joseph Joachim Jean.
Improvements in the manufacture of iron and other metals, and in the apparatus employed therein, parts of which are applicable for other purposes where high temperatures are employed, and also for ventilation.	2425	3rd Oct. 1863	Edward Brown Wilson.
Improvements in and application of apparatus for aiding the combustion of fuel.	2435	5th Oct. 1863	George Henry Ellis.
Improvements in steam-engines and in furnaces and boilers for the same.	2437	5th Oct. 1863	Thomas Ivory.
Steam-boilers and furnaces - - - (*Communicated by Johann Christian Carsten Meyn.*)	2444	6th Oct. 1863	Richard Archibald Brooman.
Improvements in refining crude pig iron and in furnaces connected therewith.	2477	9th Oct. 1863	George Parry.
An improved method of condensing and purifying the fumes and gases arising from the treatment of metals and metallic ores and substances.	2482	9th Oct. 1863	Richard Martyn.
Improved apparatus for purifying waste gases from blast and other furnaces.	2485	10th Oct. 1863	John Vaughan.
Fire-bars for the furnaces of steam-boilers and the mode of mounting the same - -	2517	14th Oct. 1863	Ewing Pye Colquhoun. John Pardoe Ferris.
Means of uniting or joining plates or sheets of metal, which invention is applicable to the construction of boilers, tubes and other useful purposes.	2549	17th Oct. 1863	Edward Henry Cradock Monckton.
Improvements in the application of steam combined with air as a motive-power and for other purposes.	2620	23rd Oct. 1863	James Parker.
Fans for forcing and exhausting air or other gases (*For blowing blast furnaces.*)	2726	4th Nov. 1863	Edward Hughes.
Certain apparatus for injecting and ejecting fluids (*Producing hot blast for furnaces.*)	2775	7th Nov. 1863	Andrew Barclay. Alexander Morton.
Caloric or heated air engines - - - (*Communicated by Henry Messer.*)	2806	11th Nov. 1863	Walter Davis Richards.
Improvements in the construction of blast cylinders, and also in the form and method of working the valves of the same. (*See* "AIR SUPPLYING.")	2902	19th Nov. 1863	William Henry Gray.
Improvements in the manufacture of metal drums and cans for holding oils and other fluid matters, and in furnaces used in such manufacture.	2911	19th Nov. 1863	William Benjamin Hodson.
Improvements in machinery for the manufacture of bolts, nuts, spikes and rivets, and also in furnaces for heating blanks to be formed into such articles.	2936	21st Nov. 1863	Francis Watkins.

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Manufacture of iron - - - - -	1513	17th June 1863	William Henry Dawes.
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Improvements in expelling solid and liquid refuse matter from steam and sailing ships, below the water line, applicable also for discharging cannon below water from ships and forts, and in part for charging gas retorts and iron furnaces, and for other similar useful purposes. (*Communicated by John Palmer.*)	1843	23rd July 1863	Matthew Augustus Soul.
An improved fire-proof cement which may be employed for covering walls, ceilings and floors, and is also applicable in the manufacture of fire bricks, crucibles, retorts, melting pots, and for other purposes where fire resisting properties are required. (*For lining furnaces.*)	1908	1st Aug. 1863	Richard Edwin Bibby.
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FURNACES, &c.—*continued.*			
Improvements in the manufacture of iron and steel, and in apparatus to be employed in such manufacture. (*Communicated by William Gerhardt.*)	2293	18th Sept. 1863	George Davies.
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An improved method of condensing and purifying the fumes and gases arising from the treatment of metals and metallic ores and substances.	2482	9th Oct. 1863	Richard Martyn.
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Means of uniting or joining plates or sheets of metal, which invention is applicable to the construction of boilers, tubes and other useful purposes.	2549	17th Oct. 1863	Edward Henry Cradock Monckton.
Improvements in the application of steam combined with air as a motive-power and for other purposes.	2620	23rd Oct. 1863	James Parker.
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Certain apparatus for injecting and ejecting fluids (*Producing hot blast for furnaces.*)	2775	7th Nov. 1863	Andrew Barclay. Alexander Morton.
Caloric or heated air engines - - - (*Communicated by Henry Messer.*)	2806	11th Nov. 1863	Walter Davis Richards.
Improvements in the construction of blast cylinders, and also in the form and method of working the valves of the same. (*See* "AIR SUPPLYING.")	2902	19th Nov. 1863	William Henry Gray.
Improvements in the manufacture of metal drums and cans for holding oils and other fluid matters, and in furnaces used in such manufacture.	2911	19th Nov. 1863	William Benjamin Hodson.
Improvements in machinery for the manufacture of bolts, nuts, spikes and rivets, and also in furnaces for heating blanks to be formed into such articles.	2936	21st Nov. 1863	Francis Watkins.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FURNACES, &c.—*continued.*			
Improvements in furnaces and apparatus for the manufacture of volatile hydro-carbons, which improvements are also in part applicable to furnaces and apparatus for the manufacture of illuminating gas.	2981	27th Nov. 1863	Frederic Page.
Improvements in heating, parts of the invention being applicable to other purposes - - - (*Form of furnace.*)	3055	5th Dec. 1863	Samuel Alfred Varley. Cromwell Fleetwood Varley.
Improvements in obtaining and applying heat and in apparatus therefor, being also in part applicable for lighting - - - (*For reverberatory furnaces.*)	3057	5th Dec. 1863	William Gorman. John Paton.
Apparatus for regulating the passage of aëriform and other fluids. (*Draft in furnace chimneys.*) (*Communicated by Charles Joseph Louis Meynard.*)	3096	8th Dec. 1863	Michael Henry.
Furnaces, fire-grates and fire-bars - - -	3105	9th Dec. 1863	Joseph Wright.
Improvements in fire-bars for the boilers of locomotive and other engines, and for fire-boxes and furnaces generally.	3165	15th Dec. 1863	William Williams Box.
Improvements in utilizing the waste liquors resulting from the preparation of fibrous matters in paper pulp making, and in the machinery or apparatus to be used therein - - - (*Construction of furnace.*)	3168	15th Dec. 1863	Henry Chadwick. John Clench.
Locomotive engines and trains for railways, tramways and common roads. (*Feeding liquid fuel.*)	3195	18th Dec. 1863	William Bridges Adams.
Improvements in the manufacture of iron and steel, and in the machinery, apparatus and furnaces used therein, and for the production and application of gas to be employed in such manufacture, and the application of parts of the said apparatus to the manufacture of glass and alkali.	3213	19th Dec. 1863	William Henry Tooth.
Improvements in the arrangement of furnaces, flues and kilns for drying and burning bricks, tiles and other articles, and in the application of the heat from the kilns to boilers for generating steam.	3266	24th Dec. 1863	James Duckett.
Improvements applicable to steam-boilers for economising fuel.	3274	28th Dec. 1863	Thomas Hall.
FURNITURE:—BEDSTEADS, TABLES, CHAIRS, CRADLES AND NURSING-APPARATUS; CASTERS; BEDSTEAD-BOTTOMS.			
Improvements in chairs and other seats or apparatus for sitting or reclining on, which improvements are also applicable to tables.	24	3rd Jan. 1863	Edwin Skull. Edwin Mealing.
An improved locomotive apparatus - - (*Castors.*)	76	9th Jan. 1863	Edmond Alfred Goupil.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FURNITURE, &c.—*continued.*			
Apparatus applied to perambulators, invalid chairs and other carriages.	100	13th Jan. 1863	Thomas George Lewis.
Apparatus for preventing sea-sickness - - (*Suspending chairs, couches, &c.*)	152	17th Jan. 1863	Isaac Ashe.
Manufacture of cornices, joints and laths of bedsteads and other articles of furniture.	235	27th Jan. 1863	Charles Frederick Ash.
Improved table apparatus for promoting the comfort of persons at sea. (*Communicated by Hyacinte Clare.*)	387	13th Feb. 1863	William Edward Gedge.
Mode of constructing spring mattrasses and other such articles for sitting and reclining upon.	400	14th Feb. 1863	William Crane Paul. Alfred Thomas Shore.
Certain improvements in handles for doors, drawers and other means of enclosure.	500	24th Feb. 1863	John Hawthorn.
An improvement or improvements in the construction of castors for tables, chairs, and other furniture or other articles.	520	25th Feb. 1863	Joseph Fitter.
Dining tables - - - - -	600	3rd March 1863	William Parsons.
Spring bed bottom - - - -	604	4th March 1863	Amedée Paul, jeune.
Certain improvements in springs to be employed in the manufacture of beds, seats or for similar purposes where an elastic surface is required.	619	5th March 1863	Robert Doyne Dwyer.
The better and more commodious manufacture of all kinds of easy lounging and invalid chairs, seats or settles.	636	6th March 1863	Alfred Wilson.
Cheffonier bedsteads - - - -	766	23rd March 1863	Julia Eyles.
A new caster for furniture - - -	1050	27th April 1863	Maurice Valkenhuyzen.
Spring mattresses - - - - - (*Communicated by Madame Julie Adolphine Massé.*)	1195	12th May 1863	Richard Archibald Brooman.
Spring mattresses, sofas, chairs, seats and similar articles. (*Communicated by Marc Louis Denis.*)	1196	12th May 1863	Richard Archibald Brooman.
An improved rail or holder for coats or other articles	1277	21st May 1863	William Henry Clapp.
Improvements in the construction of the frames, sashes, shutters, blinds and ventilators for windows or other openings, part of which improvements are also applicable to other constructive purposes. (*Closing in of beds.*)	1315	25th May 1863	John Hilliar.
Reclining and easy chairs - - - -	1316	25th May 1863	Charles Hare.
Mode of producing ornamental surfaces applicable to the general purposes of decoration. (*Ornamenting furniture.*)	1335	28th May 1863	Francis Robert Pilts.
An improved loose clip and socket joint applicable to bedsteads, sofas, chairs and other articles of furniture, and of fencing.	1348	29th May 1863	Eli Ironmonger.
Mounting and fitting bedsteads, chairs and other moveable seats on board ship. (*Communicated by Herman Hoback and Martin Henri Rumpf.*)	1415	8th June 1863	William Clark.
Improvements applicable to the ornamentation or decoration of articles of furniture, part of which improvements may also be applied for architectural ornamentation.	1471	12th June 1863	Thomas Charles March.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FURNITURE, &c.—*continued.*			
Improvements in stoppers and lids or covers for jars, bottles and other vessels, also in closing and fastening other articles - - - - (*Fastening drawers.*)	1625	30th June 1863	Josiah George Jennings. Manuel Leopold Jonas Lavater.
An improved mode of and apparatus for manufacturing metallic joints for bedsteads, and the application of such joints to certain parts of bedsteads - - - - -	1634	1st July 1863	Thomas Alliston. Richard Swift.
Construction of seats, chairs, sofas, lounges and other similar articles of furniture. (*Communicated by François Carré.*)	1687	7th July 1863	William Edward Gedge.
Canopies of bedsteads of metal or wood or both combined, and other articles of furniture used to sit or recline upon.	1793	17th July 1863	Angelo James Sedley.
Air and water beds, pillows, bolsters and cushions -	1816	20th July 1863	Frederick Ayckbourn.
Construction of benches or desks for schools, churches and other similar purposes.	2161	1st Sept. 1863	John Henry Banks.
Certain improvements in metallic bedsteads -	2414	2nd Oct. 1863	Robert Charlton.
Construction of various articles of furniture - -	2470	8th Oct. 1863	John Mead.
Ornamenting glass and sheet gelatine - - (*For furniture.*)	2670	28th Oct. 1863	William Nall.
Improvements in the construction of articles of furniture known as wardrobes, including improved arrangements for attaching doors to the same, such improvements in attaching doors being applicable to other articles of furniture.	2702	31st Oct. 1863	William Law.
Beds and bedding - - - - -	2719	3rd Nov. 1863	John Peter Booth.
Improvements in the construction of music stools, tables and other articles of furniture, and in means of securing such articles to floors.	2877	17th Nov. 1863	Frederick William Burton.
An apparatus applicable to time, fare, distance and other tables, almanacs, arithmetical calculations, postal and other boxes. (*Applicable to dressing-cases.*)	2882	18th Nov. 1863	Thomas Christopher Kimpton.
Means of fitting together or connecting articles or parts of articles. (*Bedsteads, &c.*)	2992	28th Nov. 1863	Eli Ironmonger.
An improved preparation for the treatment of flock and other furniture padding to render the same obnoxious to vermin.	3097	8th Dec. 1863	James Tod.
GAMES AND EXERCISES.			
Gymnastical apparatus - - - - -	230	26th Jan. 1863	Alfred Leonore Liétout. Joseph Brigitte Roisin.
An "all England's" cricketer's clasp - - (See "BELTS.")	710	17th March 1863	John Henry Brierley. Barzillai Greenwood.
Improvements in swimming baths and in apparatus for swimming, part of which apparatus is applicable to sailing or moving vessels in a circle. (*And for amusement.*)	715	17th March 1863	John Cox.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GAMES, &c.—*continued.*			
An improvement in cricket bats - - -	1014	23rd April 1863	John Cavanah.
Manufacture of sheets, slabs and other articles when fibrous materials are employed. (*For billiard and bagatelle beds.*)	1158	8th May 1863	Charles Frederick Bielefeld.
Manufacture of chess boards and chess men - -	1957	7th Aug. 1863	Thomas Walker Guillod.
GAS, GASOMETERS, HOLDERS AND RETORTS.			
Improvements in the treatment of gas produced by the distillation of coal, cannel, bituminous shale, boghead, mineral oils, petroleum or other combustible substances and for the obtaining of certain products therefrom.	44	6th Jan. 1863	John Leigh.
Manufacture of sulphate of soda for conversion into soda and other uses. (*Producing acid gases.*) (*Communicated by Germain Adolphe Thibierge.*)	162	19th Jan. 1863	Richard Archibald Brooman.
Apparatus for steaming, cooking and generating gas - - - - - - - - -	248	28th Jan. 1863	John Oglesby. John Dickinson. William Mark Dickinson. John Dickinson the younger.
An improved mode of producing the aura electric gas.	287	31st Jan. 1863	John Grossmith.
Manufacture of gas - - - - - - (*From oil.*)	298	2nd Feb. 1863	Edward Brown Wilson.
Improvements in generating combustible gases and in the apparatus employed therefor - -	307	3rd Feb. 1863	William George Valentin. Frederick Levick.
Apparatus to be used in distilling, subliming and drying.	310	4th Feb. 1863	James Mellor.
Improvements in the application of gas for the preparation of wood work generally and iron ships, for their better preservation and reception of paint or other protecting coating, and for disinfecting ships, hospitals and other places. (*See* "PRESERVING WOOD.") (*Communicated by Henri de Lapparent.*)	348	7th Feb. 1863	William Clark.
Improvements in the production and generation of gases and in the apparatus connected therewith.	399	14th Feb. 1863	John Cronin Jeffcott.
Improvements in the construction of gas holders and in the mode of rendering gas holders self-acting.	414	16th Feb. 1863	Magnus Ohren.
Improvements in obtaining and applying motive-power, which improvements or parts thereof are applicable for raising, forcing and measuring fluids. (*Forcing air into gasometers.*)	512	24th Feb. 1863	Robert William Thomson.
Apparatus for the production and transmission of gas or other fluids - - - - -	513	24th Feb. 1863	George Bower. William Hollinshead.
Apparatus for the purpose of supplying air for mixture with gases and other aëriform fluids.	525	25th Feb. 1863	Joseph Gailey.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
FURNITURE, &c.—*continued.*			
Improvements in stoppers and lids or covers for jars, bottles and other vessels, also in closing and fastening other articles - - - - (*Fastening drawers.*)	1625	30th June 1863	Josiah George Jennings. Manuel Leopold Jonas Lavater.
An improved mode of and apparatus for manufacturing metallic joints for bedsteads, and the application of such joints to certain parts of bedsteads - - - - - -	1634	1st July 1863	Thomas Alliston. Richard Swift.
Construction of seats, chairs, sofas, lounges and other similar articles of furniture. (*Communicated by François Carré.*)	1687	7th July 1863	William Edward Gedge.
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Construction of various articles of furniture - -	2470	8th Oct 1863	John Mead.
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Gymnastical apparatus - - - -	230	26th Jan. 1863	Alfred Leonore Liétout. Joseph Brigitte Roisin.
An "all England's" cricketer's clasp - - (*See* "BELTS.")	710	17th March 1863	John Henry Brierley. Barzillai Greenwood.
Improvements in swimming baths and in apparatus for swimming, part of which apparatus is applicable to sailing or moving vessels in a circle. (*And for amusement.*)	715	17th March 1863	John Cox.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GAMES, &c.—*continued.*			
An improvement in cricket bats	1014	23rd April 1863	John Cavanah.
Manufacture of sheets, slabs and other articles when fibrous materials are employed. (*For billiard and bagatelle beds.*)	1158	8th May 1863	Charles Frederick Bielefeld.
Manufacture of chess boards and chess men	1957	7th Aug. 1863	Thomas Walker Guillod.
GAS, GASOMETERS, HOLDERS AND RETORTS.			
Improvements in the treatment of gas produced by the distillation of coal, cannel, bituminous shale, boghead, mineral oils, petroleum or other combustible substances and for the obtaining of certain products therefrom.	44	6th Jan. 1863	John Leigh.
Manufacture of sulphate of soda for conversion into soda and other uses. (*Producing acid gases.*) (*Communicated by Germain Adolphe Thibierge.*)	162	19th Jan. 1863	Richard Archibald Brooman.
Apparatus for steaming, cooking and generating gas	248	28th Jan. 1863	John Oglesby. John Dickinson. William Mark Dickinson. John Dickinson the younger.
An improved mode of producing the aura electric gas.	287	31st Jan. 1863	John Grossmith.
Manufacture of gas (*From oil.*)	298	2nd Feb. 1863	Edward Brown Wilson.
Improvements in generating combustible gases and in the apparatus employed therefor	307	3rd Feb. 1863	William George Valentin. Frederick Levick.
Apparatus to be used in distilling, subliming and drying.	310	4th Feb. 1863	James Mellor.
Improvements in the application of gas for the preparation of wood work generally and iron ships, for their better preservation and reception of paint or other protecting coating, and for disinfecting ships, hospitals and other places. (*See* "PRESERVING WOOD.") (*Communicated by Henri de Lapparent.*)	348	7th Feb. 1863	William Clark.
Improvements in the production and generation of gases and in the apparatus connected therewith.	399	14th Feb. 1863	John Cronin Jeffcott.
Improvements in the construction of gas holders and in the mode of rendering gas holders self-acting.	414	16th Feb. 1863	Magnus Ohren.
Improvements in obtaining and applying motive-power, which improvements or parts thereof are applicable for raising, forcing and measuring fluids. (*Forcing air into gasometers.*)	512	24th Feb. 1863	Robert William Thomson.
Apparatus for the production and transmission of gas or other fluids	513	24th Feb. 1863	George Bower. William Hollinshead.
Apparatus for the purpose of supplying air for mixture with gases and other aëriform fluids.	525	25th Feb. 1863	Joseph Gailey.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GAS, &c.—*continued.*			
Improvements in the mode of and in the apparatus for producing gas for illuminating and heating purposes, parts of which improvements are also applicable for increasing the illuminating and heating power of ordinary lighting gas.	632	5th March 1863	William Henry Buckland.
Improvements in the manufacture of illuminating gas and in apparatus employed therein. (*Communicated by Dr. William Elmer.*)	638	6th March 1863	George Tomlinson Bousfield.
Apparatus for generating carbonic acid - -	732	18th March 1863	Auguste Morel.
A new combined range for making gas, cooking by gas and lighting, especially applicable for ships.	762	23rd March 1863	Henry Hancock.
Improvements in purifying and treating coal gas, sulphuretted hydrogen, and other gases containing sulphuretted hydrogen, and in obtaining sulphur, sulphuric and other acids in such treatment - - - - - -	956	16th April 1863	Isham Baggs. William Simpson.
Treating the waste liquors from bleaching powder stills in order to obtain hydrochloric acid and other products therefrom. (*Used to purify coal gas.*)	967	17th April 1863	Robert Calvert Clapham.
Improvements in furnaces which are principally applicable to the smelting of iron - - (*Producing combustible gases.*)	972	18th April 1863	Charles William Siemens. Frederick Siemens.
Improvements in the purification of gas ordinarily used in illuminating, and in the reduction of ores and smelting of metals by means of such gas so purified - - - - -	1143	7th May 1863	George Bower. Alexander Dick.
Improvements in coke ovens, and in building and heating ovens or retorts for generating coal gas connected therewith.	1287	22nd May 1863	George Stevens.
Heating of every industrial and private apparatus by means of the oxygen and hydrogen gases combined and obtained from the decomposition of water.	1313	25th May 1863	Hippolyte Benigne Girard.
Apparatus for compressing, holding and regulating the pressure of gas.	1523	17th June 1863	William Naylor.
An improved method of rendering atmospheric air fit for illuminating purposes, and of increasing the illuminating power of inflammable gas.	1532	19th June 1863	Henry Reynolds.
Apparatus for carburetting gases - - - (*Communicated by Henry Nordhoff.*)	1567	22nd June 1863	Louis Antoine Majolier.
Apparatus for charging air or gases with combustible vapours. (*Communicated by Joseph Chapa and Jacques Charrié.*)	1569	22nd June 1863	William Clark.
Preparation of materials to be used in the purification of gas for illumination.	1647	2nd July 1863	Alexander Angus Croll.
Improvements in the manufacture of gas for lighting and heating purposes, and in apparatus connected therewith.	1673	6th July 1863	James Samuel.
Apparatus for generating and purifying gas made from coal or other bituminous substances.	1693	8th July 1863	William Basford.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
Gas, &c.—*continued.*			
Improvements in expelling solid and liquid refuse matter from steam and sailing ships, below the water line, applicable also for discharging cannon below water from ships and forts, and in part for charging gas retorts and iron furnaces, and for other similar useful purposes. (*Communicated by John Palmer.*)	1843	23rd July 1863	Matthew Augustus Soul.
Improved apparatus for generating heat for smelting and other purposes. (*Generation of gas.*)	1946	6th Aug. 1863	John Kirkham.
Improvements in apparatus for containing and distributing gas for lighting railway carriages, steam-boats and other moveable vehicles and vessels, railway stations and other places, parts of such apparatus being suitable for governing the supply of gas and air for various purposes.	1978	11th Aug. 1863	John Thomson King.
Improvements in apparatus for generating steam and for generating gases to be used for heating steam-boilers or for other purposes.	2144	29th Aug. 1863	Louis Emile Constant Martin.
Manufacture of illuminating gas - - - (*Communicated by Dr. William Elmer.*)	2162	1st Sept. 1863	George Tomlinson Bousfield.
Manufacture of gas and other substances from tan and similar materials.	2187	5th Sept. 1863	William Lorberg.
Improved means of and apparatus for employing vapours, gases and the heat derived from combustible matters. (*See* "Furnaces.")	2241	11th Sept. 1863	Louis Meyer.
Treatment of rags and obtaining valuable chemical products from the animal fibre therein. (*Obtaining illuminating gas.*)	2294	18th Sept. 1863	William Lorberg.
Gas condensers - - - - - - (*Communicated by John Brunt and Alexander Renaux.*)	2344	23rd Sept. 1863	Edward Thomas Hughes.
Improvements in apparatus for supplying gas to railway carriages and other moving structures, and in apparatus for manufacturing and holding gas in ships and other vessels, parts of such apparatus being also applicable for manufacturing and holding gas elsewhere.	2374	26th Sept. 1863	William Malam. William Tice.
Manufacture of gas from tar - - -	2467	8th Oct. 1863	William Lorberg.
Apparatus for purifying and increasing the illuminating power of gas.	2487	10th Oct. 1863	Julius Ruthardt. Ferdinand Thiele.
Improvements in increasing the illuminating power of coal gas and in the means or apparatus employed therein.	2582	21st Oct. 1863	Nathaniel Fortescue Taylor.
The manufacture and application of gases to aid in the lighting of railway carriages separately or conjointly, omnibuses or other carriages, ships, steam-boats or other such like vessels, lighthouses, or other places where portable gas apparatus may be required.	2966	25th Nov. 1863	Edward Bevan.
Improvements in preparing materials useful in the purifying of gas from sulphuretted hydrogen, carbonic acid and ammonia, and in making ammoniacal compounds.	2971	26th Nov. 1863	Richard Laming.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GAS, &c.—*continued.*			
Improvements in furnaces and apparatus for the manufacture of volatile hydro-carbons, which improvements are also in part applicable to furnaces and apparatus for the manufacture of illuminating gas.	2961	27th Nov. 1863	Frederic Page.
Improvements in generating gas for illuminating and other purposes when made by passing atmospheric air over or through volatile oils, and treating such gas and the gas made from coal or cannel after leaving the generators, so as to improve the heating and illuminating qualities thereof, and in the apparatus for effecting the same.	3023	2nd Dec. 1863	William Wilson.
Improvements in the process and manner of making gas for illuminating, heating and other purposes, a part of which may also be applied to the production of metallic oxydes. (*Communicated by William Henry Gwynne.*)	3029	2nd Dec. 1863	Henry Holdrege.
Improved methods of obtaining oxygen gas -	3046	4th Dec. 1863	John Robbins.
Generators for making gas from volatile fluids -	3136	12th Dec. 1863	Thomas Clayton.
Improvements in the manufacture of iron and steel, and in the machinery, apparatus and furnaces used therein, and for the production and application of gas to be employed in such manufacture, and the application of parts of the said apparatus to the manufacture of glass and alkali.	3213	19th Dec. 1863	William Henry Tooth.
Means or apparatus employed in increasing the illuminating power of coal gas.	3289	29th Dec. 1863	Nathaniel Fortescue Taylor.
For Carbonic Acid Gas, *see* "AËRATING." For Nitrous Acid Gas, *see* "ACIDS."			
GAS AND OTHER BURNERS AND REGULATORS; GAS FITTINGS; LIGHTING GAS; PREVENTING ESCAPE OF GAS.			
Certain improvements in fixed and portable lights for domestic and other uses, applicable for burning gas and the mineral oils or spirits now so commonly used.	105	13th Jan. 1863	John Thomas Stroud.
Apparatus for measuring the quantity of gas supplied to single burners and increasing its illuminating power.	115	14th Jan. 1863	Joshua Kidd.
Railway, ship and other lamps - - -	129	15th Jan. 1863	Edward Howes.
Apparatus for stopping the supply of gas to burners when the light is put out.	289	31st Jan. 1863	William Drummond.
Improvements in lamps and burners, and in apparatus employed for milling or ornamenting parts of lamps, which apparatus may also be applied te other similar uses.	491	23rd Feb. 1863	Ralph Martindale.
Apparatus for regulating the flow of gas for purposes of illumination - - - -	524	25th Feb. 1863	Benjamin Lawrence. William Niblett.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GAS BURNERS, &c.—*continued.*			
A new method of and apparatus for boring into water and gas supply pipes, and fixing branch pipes thereon. (*Communicated by Edme Ernest Mathelin and Pierre Lucien Mathelin.*)	556	27th Feb. 1863	Richard Archibald Brooman.
An improved lamp burner (*Communicated by Samuel Adlam, junior.*)	610	4th March 1863	Edward William Binney.
Improvements in the construction of lamps with circular burners or wicks, for the combustion of petroleum, schist and other volatile oils, parts of said improvements being applicable to gas burners, night lights, and lamps burning spirits and animal oils.	755	21st March 1863	Charles de Groote.
Apparatus for lighting and heating	764	23rd March 1863	William Johnston.
Construction of gas-burners (*Communicated by Theodore Berents.*)	947	15th April 1863	Henri Adrien Bonneville.
Valves for water, steam and gas	1031	25th April 1863	Albert Henry Clark. Henry Hope.
Improvements in the manufacture of and in the machinery and appliances for holding, drilling, turning, tapping, fitting and shaping certain parts of steam, water, gas and lamp fittings.	1041	25th April 1863	John Thomas Stroud.
Construction of signal lanterns or lamps	1272	21st May 1863	William Nunn.
Improvements in gas-burners and in gas furnaces	1338	28th May 1863	George Gore.
Gas regulators	1477	12th June 1863	John Jones.
Valves for the passage of steam, gas and fluids	1501	16th June 1863	James John Shedlock.
Steam, gas and water tube joints	1517	17th June 1863	John Frederick Spencer.
Apparatus for compressing, holding and regulating the pressure of gas.	1523	17th June 1863	William Naylor.
Improvements in lamps and in the wicks used in such lamps	1682	7th July 1863	Louis Joseph Guichard. Germain François Joseph Lefebvre.
Burners of hydro-carbon and other fluid burning lamps.	1742	13th July 1863	Henry Coulter.
Attaching the burners of paraffine and other lamps to the founts or oil containers.	1769	15th July 1863	David Pitcairn Wright.
An improvement in gas-burners (*Communicated by Adolph Bay.*)	1798	17th July 1863	Emile Alcan.
Coal oil lamps (*Communicated by Michael Boyd Dyott.*)	1865	27th July 1863	George Haseltine.
Improvements in pipe castings for gas, water, sanitary and other general purposes, and the introduction of an elastic chemical compound to form expansive joints thereto, for prevention of leakage.	1950	7th Aug. 1863	Frederick George Mulholland.
Improvements in apparatus for containing and distributing gas for lighting railway carriages, steam-boats and other moveable vehicles and vessels, railway stations and other places, parts of such apparatus being suitable for governing the supply of gas and air for various purposes.	1978	11th Aug. 1863	John Thomson King.
Burners for lamps for burning oils or fluids	2006	13th Aug. 1863	Harvey Brown.
Improvements in the construction of gas-meters and in apparatus to be employed in connection therewith for regulating the pressure and flow of gas to the same.	2102	26th Aug. 1863	John Walter Friend.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GAS BURNERS, &c.—*continued.*			
An improved gas cock of elastic and continuous pressure.	2278	17th Sept. 1863	Zacharie Joseph Mercier.
Construction of valves and cocks for steam, water, gas and other fluids.	2290	18th Sept. 1863	James Allen.
Burners for burning all mineral oils - - (*Partly communicated by Mr. François Maurel.*)	2325	21st Sept. 1863	François Alfred Châtel.
An improved construction of gas burner - - (*Communicated by Otto Frederick Kolvig Peterson.*)	2372	26th Sept. 1863	Abraham Gleerup.
Improvements in apparatus for supplying gas to railway carriages and other moving structures, and in apparatus for manufacturing and holding gas in ships and other vessels, parts of such apparatus being also applicable for manufacturing and holding gas elsewhere - -	2374	26th Sept. 1863	William Malam. William Tice.
Barometers, gas regulators and other apparatuses for regulating and indicating the flow and pressure of liquids and fluids - - -	2383	28th Sept. 1863	John Bailey. George William Blake. William Henry Bailey.
Improvements in taps, cocks, hydrants, or valves and apparatus connected therewith, for opening, closing, regulating and facilitating and otherwise controlling the passage or flow of water, air, steam, gas and other fluids and liquids.	2432	5th Oct. 1863	Charles Tomlinson.
Lamps and stoves for the application of blast heat to horticultural, agricultural and other specified purposes. (*For gas fitters.*)	2535	16th Oct. 1863	Frederick George Stuber.
Causing a more complete combustion of gas in using it for lighting purposes.	2562	20th Oct. 1863	Cornelius Thomas Morley.
An improved burner for burning petroleum, paraffin or other hydro-carbon oils, consuming the smoke without the use of a draught chimney.	2614	23rd Oct. 1863	Alfred Joseph Martin.
An improved apparatus for regulating the emission of gas. (*Communicated by Pierre Alsina.*)	2615	23rd Oct. 1863	Joseph Claes.
Apparatus used in gas lighting - - -	2800	11th Nov. 1863	William Renwick Bowditch.
Gas burners - - - - (*Communicated by George Washington Thompson and John Thomas Tully.*)	2823	12th Nov. 1863	William Edward Newton.
Improvements in heating, parts of the invention being applicable to other purposes. (*Form of gas burner.*)	3055	5th Dec. 1863	Samuel Alfred Varley. Cromwell Fleetwood Varley.
Apparatus for regulating the passage of aëriform and other fluids. (*Supply of gas.*) (*Communicated by Charles Joseph Louis Meynard.*)	3096	8th Dec. 1863	Michael Henry.
Mode of and apparatus for controlling the passage of fluids to and from casks and other vessels. (*Gas tap.*) (*Communicated by the Société Hermann Lachapelle et Glover.*)	3226	21st Dec. 1863	Michael Henry.

For Gas Pipes, *see* "PIPES."

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GAUGES, SAFETY PLUGS, WATER LEVEL INDICATORS.			
Pressure gauges and vacuum gauges - -	3	1st Jan. 1863	George Allcroft.
A dioptical metallic level indicator or liquid gauge - (*Communicated by Ferdinand Philippe Edouard Carré.*)	142	15th Jan. 1863	Désiré François Leblanc.
Preventing the explosion of steam-boilers - (*Construction of float.*)	437	17th Feb. 1863	Désiré Tassin.
Improvements in traction engines and in apparatus for indicating the pressure of steam.	669	11th March 1863	Andrew Barclay.
Attaching guards to pressure gauges - -	858	4th April 1863	John Silvester.
An improved construction of pressure gauge - (*Communicated by Philip Justice.*)	862	4th April 1863	Alfred Vincent Newton.
Improvements in furnaces and boilers for the generation of steam, partly applicable also for other purposes. (*Construction of fusible plugs.*)	942	14th April 1863	John Smith.
Improved apparatus for ascertaining the temperature of steam and its power of tension. (*Communicated by Hans Ambroseus.*)	998	22nd April 1863	Frederick Edward Bryant.
Spring balances and pressure gauges - -	1114	4th May 1863	Frank Applegate.
Improvements in apparatus for boring, mining and excavating or cutting, in motive-power engines, and in pressure gauges - - -	1322	26th May 1863	James Munro. Robert Scott.
Improvements in apparatus for reducing and regulating the pressure or quantity of steam, and in discharging the water of condensed steam from cylinders, pipes and other vessels.	1633	1st July 1863	John Blake.
Barometers or gauges for measuring the pressure of fluids. (*Communicated by Felix Richard.*)	1715	9th July 1863	William Edward Newton.
Construction of steam and vacuum gauges -	1806	18th July 1863	George Murdoch.
Apparatus for the prevention of boiler explosions - (*Plugs.*)	1812	20th July 1863	John Bailey. William Henry Bailey.
Improvements in steam-boilers and in steam and water gauges for the same - - -	2066	20th Aug. 1863	William Galloway. John Galloway.
Barometers, gas regulators and other apparatuses for regulating and indicating the flow and pressure of liquids and fluids - - -	2383	28th Sept. 1863	John Bailey. George William Blake. William Henry Bailey.
Water gauges applicable to steam-boilers and other purposes.	2640	26th Oct. 1863	Samuel James Healey.
An improved salinometer which is applicable also as a hydro-meter, and for other similar or analogous purposes. (*Pressure gauges.*)	2655	27th Oct. 1863	Patrick Benignus O'Neill.
Improvements applicable to safety valves and pressure or temperature gauges.	2794	10th Nov. 1863	James Mash.
Hydraulic pressure gauges suitable for measuring the pressure in the cylinders of hydraulic presses.	3060	5th Dec. 1863	Sydney Smith.
Apparatus for preventing the explosion of steam-boilers.	3111	10th Dec. 1863	Henry Turner.
Apparatus for indicating the level of water in steam-boilers. (*Communicated by Charles Weyher.*)	3186	17th Dec. 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GLASS; APPLICATIONS OF GLASS.			
An improvement or improvements in glasses for lamps used in ships, railway carriages and for other like purposes.	10	1st Jan. 1863	William Robinson.
Improvements in apparatus for casting or moulding articles in glass and in imitation of precious stones or marbles.	184	21st Jan. 1863	Adolphe Boubee.
Apparatus for grinding, smoothing and polishing plate glass - - - - -	202	22nd Jan. 1863	Nicholas Wood. Joseph Stockley.
Glasses termed chimneys used for gas or other lights.	264	29th Jan. 1863	Jean Baptiste Emile Louit ainé.
An improvement or improvements in wine glasses -	453	19th Feb. 1863	William Sherwood.
Improvements in dressing millstones, in ornamenting or engraving on glass, pottery and other similar substances, and in materials employed therein. (*Communicated by Cyprien Marie Tessié du Motay and Charles Raphael Maréchal.*)	488	23rd Feb. 1863	Richard Archibald Brooman.
Improvements in preparing and obtaining photographic impressions and in the application of such impressions. (*Applied on glass.*) (*Communicated by Alphonse Louis Poitevin.*)	586	2nd March 1863	William Clark.
Manufacture of articles of pressed glass - -	642	6th March 1863	Thomas George Webb.
A new and improved mode of inlaying gold and other metals in glass, and in a composition suitable for the manufacture of jewellery and other ornaments, buttons and other similar articles - - - - -	720	18th March 1863	William Charles Wild. James Henry Randel.
The application of glass for ceilings and the like overhead parts of houses and other structures.	894	9th April 1863	Thomas Theodore Heath.
Boxes or cases for the enclosure and preservation of human remains. (*Glass coffins.*)	909	10th April 1863	Henry Revell Spicer.
Improvements in dyeing and staining fabrics, parts of which improvements are also applicable for dyeing, staining and ornamenting glass and other substances.	1057	27th April 1863	Alexander Rollason.
Production of show tablets, advertisement tablets, name plates, architectural facings and decorations, and other ornamental, decorative and inscriptive articles - - - - -	1111	4th May 1863	John Morris Johnson. Edmund Johnson. Charles Johnson. Louis Bertling.
Glass and other furnaces or kilns - - -	1189	12th May 1863	Thomas Warren.
Improvements in the manufacture of iron and other metals, and in the apparatus employed therein, parts of which are applicable for other purposes where high temperatures are employed.	1238	16th May 1863	Edward Brown Wilson.
Manufacture of glass . - - - -	1497	15th June 1863	Tony Petitjean.
Improvements in protecting or preserving the silvering or quicking on glass, and in the manufacture of glass vessels for silvering or quicking. (*Communicated by Joseph Jules Anthoine and François Etienne Hyppolite Brossette.*)	1512	16th June 1863	Richard Archibald Brooman.
Improvements in instruments or apparatus to be used in the manufacture of glass finger plates and other articles made of glass, and in kilns for annealing articles made of glass.	1684	7th July 1863	Eliezer Edwards.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GLASS, &c.—*continued.*			
Furnaces for boilers, smelting and other useful purposes.	1760	14th July 1863	James Davison.
Pounded glass powder used for cleaning metals and also for tooth powder.	1795	17th July 1863	Jean Darrieux.
Means of and apparatus for heating, melting, boiling, evaporating and other useful purposes. (*Annealing glass.*)	1824	21st July 1863	Charles Stewart Duncan.
Furnaces for heating, flattening and annealing glass (*Communicated by Andrew Kesler Hay.*)	2022	15th Aug. 1863	George Davies.
The manufacture of a flexible translucent material or fabric to be used as a partial substitute for glass. (*Communicated by Christoph Süssegger.*)	2165	2nd Sept. 1863	Moritz Pinner.
Improvements in the manufacture of iron and other metals, and in the apparatus employed therein, parts of which are applicable for other purposes where high temperatures are employed, and also for ventilation. (*And for manufacture of glass.*)	2425	3rd Oct. 1863	Edward Brown Wilson.
Improvements in the manufacture of the prisms, lenses and glasses of stereoscopes, and in ornamenting glass.	2618	23rd Oct. 1863	Victor Julien Cassaignes.
Ornamenting glass and sheet gelatine - -	2670	28th Oct. 1863	William Nall.
Improvements in obtaining and applying heat and in apparatus therefor, being also in part applicable for lighting - - - - - - (*For melting glass.*)	3057	5th Dec. 1863	William Gorman. John Paton.
Manufacture of glass - - - - - - (*Communicated by M. Tony Petitjean.*)	3154	14th Dec. 1863	Eugène Rascol.
Improvements in grinding and polishing glass and in the machinery or apparatus employed therein. (*Communicated by James Dodge.*)	3167	15th Dec. 1863	John Henry Johnson.
Improvements in the manufacture of iron and steel, and in the machinery, apparatus and furnaces used therein, and for the production and application of gas to be employed in such manufacture, and the application of parts of the said apparatus to the manufacture of glass and alkali.	3213	19th Dec. 1863	William Henry Tooth.
See also "BOTTLES."			
GLOVES; GLOVE FASTENINGS.			
Studs or fastenings adapted to holding together parts of shirt fronts, wristbands, collars, gloves and other articles of wearing apparel.	712	17th March 1863	William Henry Atkinson.
Perfuming of gloves - - - - - -	1983	11th Aug. 1863	James Wheeler.
Fastening gloves - - - - - - -	2182	3rd Sept. 1863	Joseph Loebl. Ignaz Pick.
An improved clasp or fastening for gloves or other wearing apparel, for umbrellas, travelling bags or other similar objects.	2631	24th Oct. 1863	Louis Joseph Hannart.
An improved coupling or buckle - - - (*For gloves.*)	2740	5th Nov. 1863	Bewicke Blackburn.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GOVERNORS AND INDICATORS OF SPEED AND POWER FOR STATIONARY ENGINES AND MACHINERY; STARTING, STOPPING AND REVERSING APPARATUS; MACHINERY BREAKS.			
Warping or beaming machines - - - (*Stop motion.*)	34	5th Jan. 1863	John Howard. John Bullough.
Application of power designed for stationary and traction engines, propellers and other machinery. (*Varying speed.*) (*Communicated by Perry Dickson and William Ashley Jones.*)	99	12th Jan. 1863	William Edward Newton.
Hot-air engines - - - - (*Communicated by Elmer Townsend.*)	155	17th Jan. 1863	George Tomlinson Bousfield.
Looms for weaving - - - - (*Stopping.*)	218	24th Jan. 1863	Ellis Shackleton.
Means or apparatus for effecting telegraphic communications.	241	27th Jan. 1863	David Edward Hughes.
Improvements in the manufacture of braid and in machinery or apparatus employed therein. (*Stop mechanism.*) (*Communicated by Thomas James Sloan.*)	257	28th Jan. 1863	John Henry Johnson.
A new or improved coupling and break for transmitting or regulating or arresting motion.	263	29th Jan. 1863	Thomas Aldridge Weston.
Certain improvements in looms for weaving - (*Stop motion.*)	284	31st Jan. 1863	Mark Smith.
Certain improvements in machinery or apparatus for warping or beaming yarns or threads - (*Stopping.*)	452	19th Feb. 1863	Thomas Markland. John Charles Dickinson.
Governors or apparatus for regulating the speed of steam-engines or other engines for driving machinery.	469	20th Feb. 1863	Friedrich William Benndorf.
Certain improvements in machinery for preparing and doubling cotton and other fibrous substances - - - - - (*Stopping the frames.*)	473	21st Feb. 1863	Henry Kilshaw. Thomas Elce, junior.
An improved method of and apparatus for controlling and facilitating locomotion whether on land or on water.	554	27th Feb. 1863	John Ambrose Coffey.
Certain improvements in mules for spinning and doubling.	588	3rd March 1863	Thomas Emmott.
Back beam warping machines - - - (*Break.*)	673	11th March 1863	William Rossetter.
Governors for marine and other engines - -	685	13th March 1863	William Hermann Stübbe.
Steam-engines and generators - - -	872	7th April 1863	John Swinburne. John Stanley.
Screw-cutting lathes - - -	912	10th April 1863	Josiah Gimson.
Machinery for hammering, rolling and shaping metals.	924	13th April 1863	John Ramsbottom.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GOVERNORS, &c.—*continued.*			
Improvements in the action and arrangement of machines for winding cops, in the construction and arrangement of banks for holding cops for warping purposes, in the formation of shuttles for receiving cops, and for apparatus for packing and securing cops in shuttles, one part of which improvements consisting of a spring clutch is applicable to machines in general - - (*Stopping or starting rotation.*)	937	14th April 1863	John Combe. John Henry Smalpage.
Marine steam-engine governors - - - (*Communicated by Henry Behrens.*)	990	21st April 1863	Mark Runkel.
Machinery for spinning and doubling - - (*Throwing in and out of gear.*)	1013	23rd April 1863	Peter M'Gregor.
Machinery for cleaning, sorting according to size and doubling silk and other threads. (*Stop mechanism.*)	1039	25th April 1863	Ira Dimock.
Machinery or apparatus for making ices - - (*Arresting rotation.*)	1040	25th April 1863	Alexandre Legras.
Certain improvements in power looms for weaving (*Break.*)	1179	11th May 1863	Christopher Shorrock. William Shorrock.
Looms for weaving - - - - - - (*Reversing motion.*)	1192	12th May 1863	William Whiteley.
Machinery for preparing, dressing and winding cotton, woollen, flax, silk and other warps. (*Communicated by Pierre François Dacheux and Gustave Lefebvre.*)	1197	12th May 1863	Richard Archibald Brooman.
Machinery or apparatus for roving, spinning and doubling cotton and other fibrous materials -	1290	22nd May 1863	James Higgins. Thomas Schofield Whitworth.
Steam hammers - - - - - -	1292	23rd May 1863	John Sturgeon.
Valves and apparatus for regulating the speed of steam-engines - - - - - - (*Partly communicated by Frederic Perry.*)	1377	2nd June 1863	George Allam Barrett. William Exall. Charles James Andrewes. Alfred Barrett.
Reversing levers for locomotive engines and others -	1462	11th June 1863	James Johnson. William Braithwaite.
Apparatus for regulating the speed of steam and hydraulic engines.	1938	6th Aug. 1863	Joseph Gustave Pinède.
Certain improvements in apparatus for governing or regulating the speed of engines. (*Communicated by Arnold Winder.*)	2023	15th Aug. 1863	Edward Scott.
Modes of propelling and steering vessels - - (*Reversing action of propellers.*)	2213	9th Sept. 1863	Walter Henry Tucker.
Machinery or apparatus for winding yarns or thread - - - - - - - (*Stopping the spindle.*)	2233	10th Sept. 1863	Matthew Andrew Muir. James M'Ilwham.
Certain improvements in braiding machines - (*Stopping the mechanism.*)	2239	11th Sept. 1863	Thomas James Sloan.
Machinery or apparatus for making bricks, tiles, pipes and other similar articles. (*Stopping the machinery.*)	2335	22nd Sept. 1863	Peter Effertz.
Improvements in machinery applicable to steam and water engines (as motors), which machinery is also applicable to lift and force pumps. (*Reversing.*)	2341	23rd Sept. 1863	James Platt.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GOVERNORS, &c.—*continued.*			
Motive engines worked by water, steam or other motive power - - - - - - - (*Partly communicated by Albert Westfield.*)	2430	5th Oct. 1863	Christopher Brakell. William Hoehl. William Günther.
Propelling - - - - - - - - (*And reversing.*)	2431	5th Oct. 1863	John Martin Stanley. Jabez Stanley.
Certain improvements in machinery or apparatus for governing the speed of steam-engines -	2474	9th Oct. 1863	James Wood. John Whitehead Thomas Tetlow.
Governors - - - - - - - -	2581	21st Oct. 1863	Christian Schiele.
Means or apparatus employed in preparing and twisting cotton, wool and other fibrous materials. (*Stopping the apparatus.*)	2815	12th Nov. 1863	Alfred Illingworth.
Windlasses - - - - - - - (*Reversing.*)	2904	19th Nov. 1863	Edmund Walker.
Machinery for puddling iron and steel - - (*Reversing.*)	3093	8th Dec. 1863	Thomas Harrison.
Apparatus for reversing the motion of locomotives and other steam-engines	3104	9th Dec. 1863	William Macklin.
Improvements in steam-engines and boilers, and in processes or apparatus to be employed in working the same. (*Starting gear.*)	3212	19th Dec. 1863	James Howden.
An improved teasling machine - - - (*Throwing in and out of gear.*) (*Communicated by Paul Joseph Vasset senior.*)	3298	30th Dec. 1863	William Edward Gedge.
GRINDING AND CRUSHING CORN, GRAIN, SEEDS, &c.; DRESSING FLOUR; MILLSTONES; DECORTICATING GRAIN.			
Manufacture of artificial stone - - - (*For millstones.*) (*Communicated by Joseph Sepulchre.*)	157	19th Jan. 1863	Ephraim Sabel.
Improvements in rotary screens and in the machinery or apparatus employed in the manufacture of such screens.	424	16th Feb. 1863	William Nalder.
Improvements in dressing millstones, in ornamenting or engraving on glass, pottery and other similar substances, and in materials employed therein. (*Communicated by Cyprien Marie Tessié du Motay and Charles Raphael Maréchal.*)	488	23rd Feb. 1863	Richard Archibald Brooman.
Cleansing and treating certain descriptions of wheat and other grain. (*Decorticating.*)	727	18th March 1863	Benjamin Wren.
Machinery or apparatus for cleaning and decorticating grain.	822	30th March 1863	Wilson Ager.
Improved machinery or apparatus for drying coal, grain and other substances. (*Potatoe flour, &c.*)	857	4th April 1863	Prosper Hanrez.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GRINDING CORN, &c.—*continued.*			
Improved apparatus for bolting flour - - - (*Communicated by Jacques Chiron, André Chiron and Pierre Faure.*)	860	4th April 1863	William Edward Gedge.
Improvements in smut machines and in machines for cleansing and peeling grain and seeds.	962	16th April 1863	François Antoine Edmond Guironnet de Massas.
Improvements in apparatus for hulling grain and for reducing granular substances.	976	18th April 1863	Gustav Adolph Buchholz.
Apparatus for transmitting, equalizing and registering human power - - - - - (*For grinding grain.*)	997	21st April 1863	William Ryan. William Daniel.
Improvements in threshing machines, part of which improvements are also applicable for hulling, decorticating, cleaning and polishing grains and seeds. (*Communicated by Aristide Barbier and Nicolas Edouard Daubrée.*)	1042	25th April 1863	William Edward Newton.
Mounting or hanging millstones for grinding grain and other substances.	1122	5th May 1863	Peter Bradshaw.
Certain improvements in apparatus for cleansing potatoes and in decorticating the same and other esculent roots - - - - - -	1130	6th May 1863	Samuel Hibbert. John Lawton. James Kay.
Improvements in machinery or apparatus for grinding, crushing, cleaning, and hulling or shelling various kinds of farm or vegetable produce, also applicable to the crushing or grinding of minerals and other substances.	1226	15th May 1863	John Patterson.
Machinery or mills for crushing or reducing oil cake, seeds and other substances. (*Communicated by Samuel Hebblewhite.*)	1244	18th May 1863	Benjamin Hebblewhite.
Construction of flour and meal mills - -	1393	4th June 1863	Stephen Blake. Thomas Lee. Robert Dutton.
Machinery for reducing cocoa nut kernels and other substances to a state of pulp.	1468	12th June 1863	John Charles Wilson.
An improved machine for unhusking rice and other seeds.	1469	12th June 1863	John Charles Wilson.
Apparatus for removing the bran or outer skin from wheat and other grain - - - - -	1508	16th June 1863	Joseph Steele. William Mason.
Improvements in decorticating grain and seeds, and in the application of the products obtained by and materials used in decorticating. (*Communicated by Jules Lemoine and Louis Joseph Maximilien Chollet.*)	1542	19th June 1863	Michael Henry.
Certain improvements in the construction of reels covered with silk or other suitable material, used as machines for the purpose of dressing flour -	1543	20th June 1863	Thomas Smith. Thomas Moore. Major Burrell.
Machinery for decorticating and cleaning corn and other grain. (*Communicated by Louis Basilide Sulpice Poissant.*)	1655	3rd July 1863	Robert Davison.
An improved mill for grinding bones, grain, logwood and such like substances.	1883	30th July 1863	George Inskeep.
Obtaining farinaceous material from potatoes -	1965	8th Aug. 1863	Michael Smith.
Improved apparatus for cleaning and decorticating grain and seeds. (*Communicated by Adolphe Rousseau.*)	2181	3rd Sept. 1863	Alfred Vincent Newton.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GRINDING CORN, &c.—*continued.*			
An improved machine for pressing or crushing spent hops. (*Or grain and seeds.*)	2439	5th Oct. 1863	Robert Pepper.
Improvements in smut machines and in machines for cleansing and peeling grain and seeds.	2534	16th Oct. 1863	François Antoine Edmond Guironnet De Massas.
Flour dressing machines termed "silk reels" -	2843	14th Nov. 1863	Joseph Ellison.
Improvements in the knives used for the cylinders and blocks of rag cutting or beating engines, the same arrangement of knives being also applicable to the crushing or beating of other substances. (*Communicated by F. Meyer.*)	3238	22nd Dec. 1863	William Edward Gedge.
Improvements in machinery or apparatus for grinding, crushing and hulling or shelling various kinds of farm or vegetable produce, applicable also to the crushing and grinding of minerals and other hard substances.	3297	30th Dec. 1863	John Patterson.
GRINDING AND CRUSHING MINERALS, CLAY, FIBROUS PLANTS, &c; BREAKING STONE.			
Improvements in the construction and mode of working apparatus to be employed in pressing, moulding, shaping, embossing, crushing, shearing and cutting metallic and other substances. (*Crushing mineral substances.*)	37	5th Jan. 1863	Henry Bessemer.
Machinery for crushing and grinding quartz and other substances.	167	20th Jan. 1863	Joseph Mosheimer.
Machinery and process for reducing wood to a fibrous condition, for the manufacture of paper stuff or pulp.	188	21st Jan. 1863	Carl Heinrich Roeckner.
An improved machine for crushing and amalgamating auriferous quartz, and pulverizing and washing ores - - - - - -	355	9th Feb. 1863	Henry George Williams. Rowland Gwynn Price.
Improvements in producing imitation gilding on paper hangings and other surfaces, also in metal leaf and metallic or bronze powder suitable for the purpose.	495	23rd Feb. 1863	John Erwood.
Certain improvements in machinery or apparatus for crushing, grinding and dressing metallic ores, quartz and other similar substances - -	884	8th April 1863	Joseph Mosheimer.
Improvements in machinery or apparatus for grinding, crushing, cleaning and hulling or shelling various kinds of farm or vegetable produce, also applicable to the crushing or grinding of minerals and other substances.	1226	15th May 1863	John Patterson.
Construction of and mode of working hydrostatic presses and hydraulic apparatus. (*For crushing metallic substances.*)	1439	9th June 1863	Henry Bessemer.
Treatment of broom for the manufacture of paper pulp. (*Communicated by Louis Alexandre Joseph Deplanque.*)	1559	20th June 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GRINDING MINERALS, &c.—*continued.*			
Improved means of and apparatus for reducing charcoal and other friable substances to fine or impalpable powder, particularly applicable to the manufacture of a substitute for lamp black. (*Communicated by Johan Ephraim Lundgren.*)	1774	15th July 1863	Richard Archibald Brooman.
An improved mill for grinding bones, grain, logwood and such like substances.	1883	30th July 1863	George Inskeep.
Machinery or apparatus for crushing and flattening the stalks of tobacco and other substances.	2134	29th Aug. 1863	Thomas Williams.
Certain improvements in machinery or apparatus for preparing and drying clay, and also in machinery to be employed in the manufacture of bricks and tiles.	2166	2nd Sept. 1863	Joseph Lewis.
Improvements in machines for crushing hard substances, for washing ores and minerals, and for separating earth and earthy matter from solid substances.	2172	2nd Sept. 1863	Frederick Charles Phillip Hoffmann.
Improved apparatus for boring and cleaving stone -	2531	16th Oct. 1863	James Polglase. Jonathan Cox.
Machinery for breaking or crushing stone -	2705	31st Oct. 1863	William Pope.
Mechanism or apparatus for reducing or pulverizing ores and other substances required to be reduced or pulverized.	2864	16th Nov. 1863	Charles Pengilly.
Improvements in the knives used for the cylinders and blocks of rag cutting or beating engines, the same arrangement of knives being also applicable to the crushing or beating of other substances. (*Communicated by F. Meyer.*)	3238	22nd Dec. 1863	William Edward Gedge.
Improvements in machinery or apparatus for grinding, crushing and hulling or shelling various kinds of farm or vegetable produce, applicable also to the crushing and grinding of minerals and other hard substances.	3297	30th Dec. 1863	John Patterson.
GRINDING AND SHARPENING; FLAT GRINDING AND POLISHING; GRINDING SURFACES; EMERY; COMPOSITION FOR POLISHING.			
Machinery for rolling, grinding and cutting files - (*Communicated by William Picket Pierce.*)	119	14th Jan. 1863	George Tomlinson Bousfield.
Manufacture of artificial stone - - - (*For grindstones.*) (*Communicated by Joseph Sepulchre.*)	157	19th Jan. 1863	Ephraim Sabel.
Apparatus for grinding, smoothing, and polishing plate glass - - - - - -	202	22nd Jan. 1863	Nicholas Wood. Joseph Stockley.
Certain improvements in machinery or apparatus for grinding or pointing the "cards" employed in carding-engines - - -	217	24th Jan. 1863	William Allen. William Johnson.
An improved lead and stone pencil sharpener -	333	6th Feb. 1863	Thomas Blakeley. Benjamin Meakes,
Improvements in carding-engines and in apparatus connected therewith - - - (*Grinding card clothing.*)	410	14th Feb. 1863	James Higgins. Henry Higgins.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GRINDING, SHARPENING, &c.—*continued.*			
Machinery for the manufacture of nails (*Pointing blanks.*)	615	5th March 1863	William Whittle.
Certain improvements in machinery or apparatus for grinding "cards" employed in carding-engines	618	5th March 1863	William Allen. William Johnson.
Improvements in polishing precious and other hard stones, and in the machinery or apparatus employed therein. (*Communicated by Victor Emanuel Tamisier.*)	877	7th April 1863	John Henry Johnson.
Machinery for opening, cleaning, carding and grinding or sharpening cards used in preparing cotton and other fibrous materials	932	13th April 1863	Thomas Mallinson. Peter Williams.
Machinery for rolling, grinding and cutting files and rasps. (*Communicated by William Picket Pierce.*)	1218	14th May 1863	George Tomlinson Bousfield.
Machinery for planishing and rolling sheet metal	1234	16th May 1863	John Titus Newton.
Machinery for rolling, polishing, straightening and tapering round rods or bars of iron, steel and other metals	1285	22nd May 1863	Joseph Jones Habershon. John Matthew Habershon. Matthew Henry Habershon.
Certain improvements in machinery for grinding card teeth	1430	9th June 1863	Edward Barlow. James Newhouse. Francis Hamilton. William Hope.
Improvements in instruments or apparatus to be used in the manufacture of glass finger plates and other articles made of glass, and in kilns for annealing articles made of glass.	1684	7th July 1863	Eliezer Edwards.
Pounded glass powder used for cleaning metals and also for tooth powder.	1795	17th July 1863	Jean Darrieux.
Pointing wire rods or wire in order to facilitate their introduction into draw-plates	2109	26th Aug. 1863	Richard Johnson. George Bedson.
Machinery or apparatus for grinding and polishing metallic articles.	2143	29th Aug. 1863	James Dodge.
Improvements in machinery for rolling, shaping or forging metals, and in apparatus for grinding and polishing the same.	2506	13th Oct. 1863	James Dodge.
Machinery or apparatus for punching, shearing and burnishing	2595	22nd Oct. 1863	John Craven. Samson Fox.
Improvements in machinery to be used in the manufacture of heel tips and toe tips and toe plates for boots and shoes. (*Polishing.*)	2789	10th Nov. 1863	George Yates.
Apparatus for grinding cards used in carding-engines	2795	10th Nov. 1863	Samuel Faulkner. John Berry. George Harrison.
Improvements in grinding pearl, and which said improvements are also applicable for grinding other materials.	3157	14th Dec. 1863	Samuel Edwards.
Improvements in grinding and polishing glass and in the machinery or apparatus employed therein. (*Communicated by James Dodge.*)	3167	15th Dec. 1863	John Henry Johnson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GUNPOWDER AND EXPLOSIVE COMPOUNDS; POWDER FLASKS.			
Powder flasks	154	17th Jan. 1863	George Haycraft.
Powder charges	581	2nd March 1863	George Hawksley. Thomas Bissell.
Action of charger or measure for powder flasks, canisters or other vessels.	678	12th March 1863	Edward Henry Lomas.
Manufacture of gunpowder (*Communicated by Samuel Ricker.*)	949	15th April 1863	William Spence.
A new explosive compound applicable for all the purposes for which gunpowder is or may be used	1062	28th April 1863	George Hall. Josiah Wells.
Closing powder canisters and other vessels (*Communicated by Joseph Sagnes.*)	2084	22nd Aug. 1863	Richard Archibald Brooman.
Hydraulic apparatus (*Presses used in making gunpowder.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Improvements in granulating and drying gunpowder, and in apparatus to be used therefor.	2230	10th Sept. 1863	Thomas Brown Jordan.
An improved mode of manufacturing gunpowder suitable for war, mining and general purposes. (*Communicated by Edward Schultze.*)	2353	24th Sept. 1863	Ernest Dronke.
Manufacture of gunpowder and powder for blasting purposes. (*Communicated by Alfred Nobel.*)	2359	24th Sept. 1863	Alfred Vincent Newton.
Manufacture of fittings for powder flasks	2494	12th Oct. 1863	William Hutchison.
An improved blasting powder (*Communicated by Bernhard August Schäffer and Christian Frederick Budenberg.*)	2555	19th Oct. 1863	Arnold Budenberg.
Improvements in the manufacture of saddles and harness, and in materials for and in ornamenting the same, which improvements are applicable for parts of carriages, dress and coverings for the head, and other articles. (*Powder cases.*)	2579	21st Oct. 1863	Thomas Charles Clarkson.
Manufacture of explosive compounds (*Gun cotton.*)	2720	3rd Nov. 1863	Julian John Rèvy.
An improved explosive compound to be used in the manufacture of cartridges, and an improved mode of manufacturing cartridges therewith	2888	18th Nov. 1863	William Wigfall. Gottlieb Jolly.
GUTTA-PERCHA AND INDIA-RUBBER. (*Preparing, Treating, Vulcanizing.*)			
An invention having reference to the treatment of ground caoutchouc, and for the purpose of rendering it elastic or improving its elasticity, as well as imparting to such caoutchouc other useful properties.	67	8th Jan. 1863	Liveras Hull.
Combining plastic substances with metals	365	10th Feb. 1863	Matthew Cartwright.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GUTTA-PERCHA, &c.—*continued.*			
Improvements in the manufacture of boots and shoes, and in preparing india-rubber for such and other uses. (*Communicated by Daniel Hayward.*)	448	18th Feb. 1863	George Tomlinson Bousfield.
An improved method of re-forming and re-using old or waste vulcanized india-rubber - -	985	21st April 1863	Alfred Ford. Richard Rigg.
Moulding and vulcanizing articles of india-rubber -	1506	16th June 1863	Josiah George Jennings. Manuel Leopold Jonas Lavater.
Manufacture of india-rubber and gutta-percha compounds. (*Communicated by Lyman Hall.*)	2373	26th Sept. 1863	Lucius Henry Norris.
Manufacture of india-rubber and gutta-percha compounds. (*Communicated by Thomas Mayall.*)	3116	10th Dec. 1863	George Tomlinson Bousfield.
Dissolving india-rubber - - - -	3183	16th Dec. 1863	Charles Humfrey.
GUTTA-PERCHA AND INDIA-RUBBER AS APPLIED IN VARIOUS MANUFACTURES.			
Manufacture of elastic fabrics - - -	4	1st Jan. 1863	Matthias Edward Bowra. Arthur Edward Francis.
Construction of boots, shoes and other coverings for the feet - - - - - -	11	1st Jan. 1863	John Edward Baker. James Landon.
An improved method of attaching sheathing to iron or other vessels.	18	2nd Jan. 1863	William Henry Muntz.
India-rubber over-shoes or goloshes - -	111	13th Jan. 1863	Lucien Lescuyer.
Articles of dress known as collars, cuffs, wristbands, shirt fronts, habit shirts, and petticoats.	212	23rd Jan. 1863	Percy Addison Cole.
Means and apparatus for copying and reproducing sculpture and other objects of art. (*Communicated by François Willème.*)	256	28th Jan. 1863	William Clark.
Construction of air-tight boxes, cases, cupboards and similar vessels.	276	29th Jan. 1863	Frederick George Stuber.
Machinery or apparatus for washing, wringing and mangling clothes or other textile fabrics.	312	4th Feb. 1863	Thomas Bradford.
Mode of uniting metallic surfaces - - - (*Communicated by William Brainerd Barnard.*)	313	4th Feb. 1863	George Haseltine.
A new kind of covering for the ears, made of india-rubber, gutta-percha or other materials.	316	4th Feb. 1863	Louis Joseph Henry Marville.
Improvements in wrought-iron casements and in the means for fastening the same, which improvements are also partly applicable to the framework of glass doors, conservatories and similar structures. (*Communicated by Louis Pierre, Vincent Etienne Eugene Jacquemin, Jean Charles Douriez and Gustav Joseph Legros.*)	413	14th Feb. 1863	John Henry Johnson.
Improvements in the manufacture of boots and shoes, and in preparing india-rubber for such and other uses. (*Communicated by Daniel Hayward.*)	448	18th Feb. 1863	George Tomlinson Bousfield.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GUTTA-PERCHA, &c.—*continued.*			
Insulating and supporting telegraph line wires -	464	20th Feb. 1863	Charles William Siemens.
Machinery for blocking and pressing hats and bonnets - - - - - -	490	23rd Feb. 1863	John Davis Welch. Alfred Phippen Welch.
Improvements in insulating and protecting telegraphic and other wires and rods, and in machinery connected therewith.	505	24th Feb. 1863	William Hooper.
Mats - - - - - - -	527	25th Feb. 1863	Henry Henson Henson.
Improvements in veneering or overlaying woods according to two methods, 1st, by means of steam exhaustion or steam pressure or air exhaustion or air pressure, 2dly, by the employment of electro-magnetism.	533	25th Feb. 1863	Alexander Macivor.
Improvements in cloth blankets and other fabrics to be used in machinery for printing fabrics, paper hangings, and letter press. (*Communicated by Achille Clément.*)	578	2nd March 1863	Frederick Tolhausen.
Fixing artificial teeth - - - -	639	6th March 1863	Dennis William Ransom.
An improved construction of elastic carriage wheel - (*Communicated by Seth Woodbury.*)	643	6th March 1863	Alfred Vincent Newton.
Certain improvements in the manufacture of hats or coverings for the head.	661	11th March 1863	Frederick Cooke.
Improvements in mariners' compasses and the parts in connection therewith, and in the application thereof to magnetic instruments.	695	14th March 1863	Robert Alexander.
Girths or bands and knee caps for horses - -	730	18th March 1863	Frederick Norrington.
Manufacture of boots and shoes - - - (*Communicated by Henry Port.*)	734	19th March 1863	George Haseltine.
Machines or apparatus for washing and wringing clothes or fabrics - - - - -	749	20th March 1863	George Coles. James Archibald Jaques. John Americus Fanshawe.
Probes, catheters and similar surgical instruments - (*Communicated by Bernard Saurel.*)	868	6th April 1863	Michael Henry.
A new composition for dressing and preparing silk, cotton and woollen tissues and fibres, and also mixtures of the same. (*Communicated by Jacques Mathevon.*)	873	7th April 1863	Henry Gilbee.
Insulating the magnetic needle or needles in compasses.	883	8th April 1863	William Simpson.
Improvements in the construction of vessels of war, part of which improvements is applicable to fortifications.	914	10th April 1863	Henry Caudwell.
Improvements in boilers for heating buildings and in regulators for the same.	948	15th April 1863	Ambrose Marriott.
Apparatus or means for lessening the recoil of cannon.	958	16th April 1863	Stephen Moulton.
Surface condensers - - - - - -	979	20th April 1863	Charles Randolph. John Elder.
An improved process for obtaining printing surfaces.	986	21st April 1863	Henry Rafter.
Moulding articles of china or other clay or of other plastic materials.	1000	22nd April 1863	François Durand.
Lawn-mowing, rolling and collecting machines -	1022	24th April 1863	John Cornes. John Coope Davis.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GUTTA-PERCHA, &c.—*continued.*			
Improved apparatus for fixing drills; which invention is also applicable for fixing apparatus for raising, supporting and suspending weights, and for other analogous purposes.	1029	25th April 1863	Leopold De Breánski.
Improvements in threshing machines, part of which improvements are also applicable for hulling, decorticating, cleaning and polishing grains and seeds. (*Communicated by Aristide Barbier and Nicolas Edouard Daubrée.*)	1042	25th April 1863	William Edward Newton.
Manufacture of mill straps and driving bands	1046	27th April 1863	George Spill. Thomas James Briggs. Daniel Spill.
Apparatus for preserving property in case of shipwreck. (*Communicated by George Mitchell.*)	1067	28th April 1863	John Henry Johnson.
Improvements in engines, machinery and apparatus for obtaining compressed air, and for applying the power thereof in propelling railway and other carriages	1092	30th April 1863	Charles Patrick Stewart. John Kershaw.
Improvements in the construction of garden pumps, part of which said improvements are applicable to fire-engines and other hydraulic machines	1107	2nd May 1863	John Thomas Oakley. Thomas Oakley.
Springs for railway carriages and other purposes (*Communicated by Richard Vose.*)	1113	4th May 1863	George Haseltine.
Improvements in the construction of piers, walls and other similar structures and of landing stages, and in the connections therewith or attachments thereto.	1225	15th May 1863	Robert Trefusis Mallet.
Certain improvements in the manufacture of "elastic webbing."	1275	21st May 1863	Nathaniel Jones Amies.
Improvements in stoppers or bungs for closing or stopping bottles, jars and other vessels and the muzzles of rifles, and for other like purposes. (*Communicated by Ferdinand Krauskopf.*)	1283	22nd May 1863	Charles Maschwitz the younger.
Manufacture of waterproof fabrics (*Communicated by John Foster Greene.*)	1288	22nd May 1863	William Edward Newton.
Improved machinery for the manufacture of waterproof fabrics. (*Communicated by John Foster Greene.*)	1289	22nd May 1863	William Edward Newton.
Covers or capsules for bottles, jars and similar vessels.	1294	23rd May 1863	John Alexander Pickering.
Apparatus for ruling paper and other materials, either alone or in combination with typographical or lithographical printing. (*Communicated by Bonaventure Tournier.*)	1320	25th May 1863	William Clark.
Blast engines	1331	27th May 1863	Hiram Craven Coulthard.
Construction of railway carriages	1363	1st June 1863	James Henson.
Improvements in indurating iron and in protecting iron and steel from oxidation.	1456	11th June 1863	James Webster.
An improved construction of removable head for casks, applicable to the closing of other vessels	1485	13th June 1863	John Solomons Benson. David Jones.
Manufacture of flexible and other tubes	1495	15th June 1863	Isaac Blue Harris.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GUTTA-PERCHA, &c.—*continued.*			
Improvements in protecting or preserving the silvering or quicking on glass, and in the manufacture of glass vessels for silvering or quicking. (*Communicated by Joseph Jules Anthoine and François Etienne Hyppolite Brossette.*)	1512	16th June 1863	Richard Archibald Brooman.
Apparatus and implements for cleaning spoons and forks.	1549	20th June 1863	George Brixey.
Making portmanteaus and trunks of various shapes and sizes, light, strong, air-tight and water-tight, capable of bearing immersion in water without injuring the contents.	1562	22nd June 1863	Edwin Wilks.
Using Apo-elastikon hyphrasma as a new and improved cloth for floors, roofs, walls, tanks and other linings, being impervious to damp and of great strength and durability.	1603	25th June 1863	William Kirrage.
Improvements in lining iron and other tubes and hollow vessels, and in manufacturing corrugated tubes of plastic materials.	1618	27th June 1863	John Chatterton.
An improved waterproof material - - - (*Communicated by Jules Wiese.*)	1635	1st July 1863	William Snell.
Boots and shoes - - - - -	1642	1st July 1863	Hiram Hutchinson.
Improvements in the manufacture of telegraphic wires and in the apparatus connected therewith. (*Communicated by Gustave Eugène Michel Gerard.*)	1668	4th July 1863	Henri Adrien Bonneville.
Mode of preserving and protecting the silvering of mirrors. (*Communicated by Diodor Briansky.*)	1721	10th July 1863	Marc Antoine François Mennons.
Certain improvements in printing stuffs and other fibrous fabrics.	1815	20th July 1863	Antoine Alexandre Pelaz.
Improvements in making all woven and thready fabrics waterproof, and in finishing or surfacing fabrics generally. (*Communicated by Etienne Guillaume.*)	1836	22nd July 1863	Charles Beslay.
An improved method of securing or tightening the cords of blind and other rollers.	1875	28th July 1863	William Thomas Smith.
Improvements in pipe castings for gas, water, sanitary and other general purposes, and the introduction of an elastic chemical compound to form expansive joints thereto for prevention of leakage.	1950	7th Aug. 1863	Frederick George Mulholland.
Application of india-rubber and gutta-percha to the manufacture of brushes and mats. (*Communicated by Anthony Pollak.*)	1963	8th Aug. 1863	Astley Paston Price.
Improved solutions to be used in the manufacture of paints, and the preservation of wood, stone and metallic surfaces, and in the preservation and waterproofing of fibrous materials generally. (*Communicated by Richard Eaton.*)	2065	20th Aug. 1863	George Spencer.
An improved method of shoeing horses and covering the feet or hoofs of other domestic animals with hardened india-rubber, gutta-percha and other improved similar materials.	2127	28th Aug. 1863	Louis Alexandre Mulet.
Improvements in steam-boilers and in apparatus connected therewith.	2130	28th Aug. 1863	Joseph Walls.
An improved machine for wringing clothes -	2132	29th Aug. 1863	Henry William Putnam.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GUTTA-PERCHA, &c.—*continued.*			
Assistant bearing springs for locomotive engines, railway carriages, waggons and trucks.	2145	31st Aug. 1863	George Attock.
Improvements in apparatus for stopping bottles, jars and other vessels, which improvements are also applicable for stopping the muzzles of fire-arms.	2223	9th Sept. 1863	Nathan Thompson.
Rollers to be used in machinery for spinning and manufacturing wool, cotton and other fibrous materials. (*Communicated by Amos Taylor.*)	2224	9th Sept. 1863	George Tomlinson Bousfield.
Improvements in side lights for ships and other navigable vessels, and in the manufacture of the same.	2229	10th Sept. 1863	John Hays Wilson.
Improvements in machinery for stamping or obliterating and printing, especially applicable to post office purposes, parts of which improvements are applicable to machines in which cams are employed.	2261	15th Sept. 1863	George Howell.
Railway carriages and all other springed vehicles -	2297	18th Sept. 1863	John Mason Cook.
Machinery for manufacturing moulded articles of india-rubber. (*Communicated by John Green.*)	2330	21st Sept. 1863	Hiram Hutchinson.
Manufacture of casks and other receptacles for containing oil, petroleum and other liquids.	2347	23rd Sept. 1863	Augustus Collingridge.
An improved joint for the tubes of surface condensers. (*Communicated by John Van Voorst Booraem.*)	2363	25th Sept. 1863	Alfred Vincent Newton.
Manufacture of driving straps or bands and of flexible tubes or hose - - - -	2367	26th Sept. 1863	George Spill. Thomas James Briggs. Daniel Spill.
An improved wax light or candle stand - -	2378	28th Sept. 1863	Pierre Bourchani.
Improvements in the mode of manufacturing submarine telegraph cables, in apparatus connected therewith, and in the method or principle of laying same, and in the preparation of the several compounds described for electric insulation and other purposes.	2386	29th Sept. 1863	Frederick George Mulholland.
Water-closets - - - - - -	2392	29th Sept. 1863	Peter Llewellen. John Llewellen. John Wanklyn James.
Packing for stuffing-boxes and pistons - -	2415	2nd Oct. 1863	James Tees.
Apparatus for regulating and working window blinds.	2449	7th Oct. 1863	David Barr.
Manufacture of academic hats - - -	2456	7th Oct. 1863	Raphael Zox.
Construction of condensers - - - (*Communicated by William Judson.*)	2472	8th Oct. 1863	Alfred Vincent Newton.
Ordnance - - - - -	2576	20th Oct. 1863	William Nelson Hutchinson.
Improvements in the manufacture of saddles and harness, and in materials for and in ornamenting the same, which improvements are applicable for parts of carriages, dress and coverings for the head, and other articles.	2579	21st Oct. 1863	Thomas Charles Clarkson.
Improvements in atmospheric railways and in carriages for the same.	2635	24th Oct. 1863	Alexander Alison.
Manufacture of nose-bags - - - - -	2636	26th Oct. 1863	Richard Littleboy.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
GUTTA-PERCHA, &c.—*continued.*			
Taps, cocks or valves - - - - - - (*Communicated by Henri Jerimie Cristen.*)	2684	30th Oct. 1863	Walter Montgomerie Neilson.
Improvements in the construction of iron and other ships, vessels and batteries of war, and of cupolas and armour plates applicable thereto, parts of which improvements are also applicable to other useful purposes.	2690	30th Oct. 1863	Barnabas Russ.
Sewing-machines - - - - - -	2727	4th Nov. 1863	Elias Howe junior.
An improved mode of and apparatus for steering and turning vessels.	2749	5th Nov. 1863	Frederick Elsworth Sickels.
Improvements in the manufacture of tubes, rings and cords of india-rubber and in covering telegraph wires.	2893	18th Nov. 1863	Josiah George Jennings. Manuel Leopold. Jonas Lavater.
Looms for weaving elastic fabrics - - -	2984	27th Nov. 1863	James Clark.
Machinery or apparatus for cutting strips or threads of india-rubber or other materials.	2985	27th Nov. 1863	James Clark.
Wringing-machines - - - - -	3049	4th Dec. 1863	Welburn Williamson.
An improved manufacture of elastic bands applicable to the production of ladies' skirts or "crinolines."	3077	7th Dec. 1863	Charles Brown.
Construction and mode of attaching of india-rubber and other composition soles to boots and shoes or to the uppers thereof.) (*Communicated by Charles MacBurney.*)	3141	12th Dec. 1863	John Henry Johnson.
Improved arrangements of apparatus or mechanism for rendering ships' cables less likely to part during heavy riding.	3144	12th Dec. 1863	Robert Saunders.
Washing machinery - - - - - (*Communicated by Thomas Mayall.*)	3147	12th Dec. 1863	George Tomlinson Bousfield.
Fulling machinery - - - - - - (*Communicated by Thomas Mayall.*)	3149	12th Dec. 1863	George Tomlinson Bousfield.
Improvements in grinding and polishing glass and in the machinery or apparatus employed therein. (*Communicated by James Dodge.*)	3167	15th Dec. 1863	John Henry Johnson.
Improvements in the manufacture of floor cloths and coverings and similar fabrics, and in pavements.	3210	19th Dec. 1863	Frederick Walton.
Shields or tips for boots and shoes - - (*Communicated by Horace Bearce.*)	3256	23rd Dec. 1863	John Henry Johnson.
Improved toys - - - - - -	3300	30th Dec. 1863	Auguste Charles Joseph Lengelée. François Phillipe Morel. Desiré George Mathieu Coquet.
Manufacture of rollers or cylinders in which a certain degree of elasticity is required.	3301	30th Dec. 1863	John Platt. William Richardson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
HAIR-DRESSING AND PERFUMERY.			
Apparatus for rendering hair wavy - -	74	9th Jan. 1863	Richard Thomas.
An improved hair creaser or divider - -	195	22nd Jan. 1863	Jules Cohen Brandès.
Hair nets - - - - (*Communicated by Edmond Paul Gilet.*)	283	30th Jan. 1863	William Edward Gedge.
A new aromatic vinegar for removing stains from cloth and other materials. (*Communicated by Philippe Prudon and Edouard Cari Mantrand.*)	648	9th March 1863	Henri Adrien Bonneville.
Improvements in the construction of locks applicable to despatch and other boxes, writing and dressing cases or other similar receptacles.	959	16th April 1863	William Oldfield.
Extraction of scents from plants, flowers and other odoriferous substances.	1109	4th May 1863	Edmund Richard Southby.
Improvements in umbrellas, parasols, sunshades, walking-sticks and whips, and in brooches and other ornaments. (*With recess for perfume.*)	1452	11th June 1863	John Francis Kain.
Improvements in protecting or preserving the silvering or quicking on glass, and in the manufacture of glass vessels for silvering or quicking. (*Perfumery bottles and jars.*) (*Communicated by Joseph Jules Anthoine and François Etienne Hyppolite Brossette.*)	1512	16th June 1863	Richard Archibald Brooman.
An improved composition suitable for the manufacture of candles and other like articles and of pomatum, and an improved wick for burning with such composition.	1610	26th June 1863	Gottlieb Boccius.
Hydraulic apparatus - - - - (*Used in manufacture of perfumery.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Improvements in extracting essences and perfumes and also oils and fats from matters containing them, also in bleaching and purifying oils and fats, and in apparatus employed therein.	2987	27th Nov. 1863	Heinrich Hirzel.
HAMMERS, SPADES, SHOVELS, PICKS.			
Improvements in machinery used in the manufacture of shovels and spades, and for raising and shaping metals for other purposes.	32	5th Jan. 1863	Henry Yates.
Steam hammers and other engines driven by steam	216	24th Jan. 1863	William Mellor. William Whaley.
Handles for hammers, mallets, picks, mattocks and similar tools.	363	10th Feb. 1863	Robert Burley.
Machinery for hammering, rolling and shaping metals.	924	13th April 1863	John Ramsbottom.
Machinery for punching metals - - - (*Steam hammer.*)	1024	24th April 1863	James Thompson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
HAMMERS, &c.—*continued.*			
Portable apparatus or instruments for rivetting, caulking, chipping and otherwise operating upon and treating metals and other substances. (*Steam hammers.*)	1095	1st May 1863	John M'Farlane Gray.
Machinery for punching, stamping or forging metals.	1103	2nd May 1863	George Burt.
Steam hammers - - - - -	1292	23rd May 1863	John Sturgeon.
Manufacture of bells and of resisting and non-cutting tools. (*Hammers, &c.*) (*Communicated by Henri Micolon.*)	1302	23rd May 1863	Richard Archibald Brooman.
An improved pneumatic hammer useful also for punching and stamping metals.	1457	11th June 1863	William Walton.
A new metallic alloy - - - - - (*For making hammers.*) (*Communicated by Henri Micolon.*)	2086	22nd Aug. 1863	Richard Archibald Brooman.
Improvements in shaping and punching metallic articles, and in the machinery or apparatus to be employed therein. (*Heads of axes.*) (*Communicated by Levi Dodge.*)	2113	26th Aug. 1863	David Blake.
An improved mode of strengthening tilt hammers -	2311	19th Sept. 1863	Benjamin Davis. William Bowler.
Improvements in machinery for rolling, shaping or forging metals, and in apparatus for grinding and polishing the same. (*Tools.*)	2506	13th Oct. 1863	James Dodge.
Improvements in the manufacture of picks, hoes, adzes and other edge tools, and in tools to be used in the said manufacture.	2564	20th Oct. 1863	Joseph Vaughan.
Steam hammers - - - - -	2715	3rd Nov. 1863	David Davy, junior.
Machinery for finishing or beetling woven fabrics, which improvements are also applicable to fulling machines.	2799	11th Nov. 1863	John Smith.
Certain improvements in the method of manufacturing spindles and "skewers" to be employed in spinning fibrous substances, and in apparatus connected therewith.	3084	8th Dec. 1863	Joseph Wray.
Forge hammers - - - - -	3189	18th Dec. 1863	Joseph Astbury.
HARNESS, SADDLES, BITS, STIRRUPS AND WHIPS; HORSE-COLLARS; HARNESSING.			
Saddlery, harness, driving straps and similar articles	462	20th Feb. 1863	Charles Billingsley.
Manufacture of saddles - - - - -	499	24th Feb. 1863	John Clay.
Fastenings suitable for portions of harness and other purposes. (*Communicated by Victor Gueldry.*)	687	13th March 1863	John Henry Johnson.
Girths or bands and knee caps for horses -	730	18th March 1863	Frederick Norrington.
Saddles - - - - - - - -	855	4th April 1863	Alexander Stewart.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
HARNESS, &c.—*continued.*			
An improvement in stirrups and in the mode of attaching the same to saddles. (*Communicated by Jacques Eugene Armengaud.*)	904	9th April 1863	Alfred Vincent Newton.
Certain improvements in the mode of finishing clasps and other such like metallic connectors, and which said mode of finish is also applicable for other purposes. (*For harness.*)	1142	7th May 1863	Alfred Stanley.
Manufacture of elastic material - - - (*For saddles and horse collars.*) (*Communicated by Gustave Mayer.*)	1229	16th May 1863	Benjamin Browne.
The preparation of a fluid for renewing the surface of japanned and enamelled leathers and cloths. (*Harness.*)	1298	23rd May 1863	William Hoey.
Improvements in umbrellas, parasols, sunshades, walking-sticks and whips, and in brooches and other ornaments.	1452	11th June 1863	John Francis Kain.
An improved composition for waterproofing, softening and preserving all kinds of leather and articles made therefrom. (*Carriage harness.*)	1648	2nd July 1863	Edward Lloyd.
An improved "anatomical" bit for horses or other animals. (*Communicated by Henry Theodor Romertze.*)	1705	9th July 1863	Samuel Davis.
Means or apparatus to facilitate the connecting and disconnecting horses and other animals with carriages.	1756	14th July 1863	Carl Oppermann.
An improved expanding and contracting horse collar.	1785	16th July 1863	Charles Stokes.
Saddles - - - - - - - (*Communicated by Jean Etienne Pohl.*)	1848	23rd July 1863	William Clark.
An improved mode of attaching horses to carriages or other vehicles, and apparatus therefor. (*Communicated by Jean François Frederic Beguin.*)	2179	3rd Sept. 1863	Henri Adrien Bonneville.
A new or improved method of adapting steel or other suitable metallic wire to be used instead of animal bristles or hair in sewing boots, shoes, saddlery, and leather works generally.	2183	4th Sept. 1863	Charles Thornhill.
Improved arrangements for facilitating the quick detachment of horses or draught animals from carriages or vehicles, and for the application of break power, with the view to prevent accidents.	2257	14th Sept. 1863	George Francis Millin.
An improved spur - - - - - -	2271	16th Sept. 1863	Benjamin Latchford.
Horse collars - - - - (*Communicated by Toussaint Landrin.*)	2360	24th Sept. 1863	Henri Adrien Bonneville.
Joining leather - - - - - (*For harness.*) (*Communicated by Toussaint Landrin*)	2361	24th Sept. 1863	Henri Adrien Bonneville.
Winkers or eye-screening apparatus for horses and other animals.	2408	1st Oct. 1863	George Dickey.
Manufacture of hames - - - -	2488	10th Oct. 1863	William Brookes Fairbanks. Joseph Lavender. Frederick Lavender.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
HARNESS, &c.—*continued.*			
Improvements in the manufacture of saddles and harness, and in materials for and in ornamenting the same, which improvements are applicable for parts of carriages, dress and coverings for the head, and other articles.	2579	21st Oct. 1863	Thomas Charles Clarkson.
Manufacture of nose-bags - - - -	2636	26th Oct. 1863	Richard Littleboy.
An improved method of stopping horses by means of pincers to be attached to bits.	2900	19th Nov. 1863	Auguste Balny.
Apparatus for sustaining and lifting draught horses to prevent them falling or injuring the vehicle to which they are attached.	3061	5th Dec. 1863	Frederick James Walthew.
HATS, CAPS, BONNETS, LADIES' CAPS, CAP-FRONTS; COVERINGS FOR THE HEAD, HEAD DRESSES, HEAD ORNAMENTS.			
Machinery and apparatus for the manufacture of trimmings and cap fronts - - - -	175	20th Jan. 1863	Hesketh Hughes. James Sanders.
Construction of hats and other coverings for the head.	209	23rd Jan. 1863	Charles Stopford.
A new kind of covering for the ears, made of india-rubber, gutta-percha or other materials.	316	4th Feb. 1863	Louis Joseph Henry Marville.
Improvements in hat brims, in the manufacture of hat brims, and in the apparatus or machinery used in such manufacture.	394	13th Feb. 1863	Oliver Hicks Hodge.
Packing bonnet fronts, rouches and other similar articles - - - - -	422	16th Feb. 1863	John Harrington Haywood. William Vernon.
Machinery for blocking and pressing hats and bonnets - - - - - -	490	23rd Feb. 1863	John Davis Welch. Alfred Phippen Welch.
Manufacture of hats - - - - - - (*Communicated by Guillaume Madelaine Lacaze.*)	502	24th Feb. 1863	William Edward Gedge.
Improvements applicable to hats, caps, helmets, military head dresses and other like coverings for the head.	547	26th Feb. 1863	Richard Joseph Nodder.
A new or improved apparatus for creasing or marking rouches.	563	28th Feb. 1863	George Royle.
Certain improvements in the manufacture of hats or coverings for the head.	661	11th March 1863	Frederick Cooke.
Improvements in bleaching and in reducing and brightening the color or tone of dyed straw plaits and straw - - - - -	733	18th March 1863	John Davis Welch. Alfred Phippen Welch.
Ornamentation by printing of felt hats - -	908	10th April 1863	Samuel Shelmerdine. John Dransfield.
An improvement in waterproof compounds and in fabrics prepared therewith. (*For bonnets and hat bodies.*)	988	21st April 1863	Edwin Lindsey Simpson.
Improvements in the manufacture of hats and bonnets, and mode of preparing feathers to be used in the said manufacture - - -	1047	27th April 1863	Hilaire Emile Carchon. Eugène François Raybaud.
Head dresses - - - - -	1198	13th May 1863	Henry Rushton.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
HATS, &c.—*continued.*			
Hats, caps and other coverings for the head -	1344	28th May 1863	Henry Thomas White.
Figuring, ornamenting and coloring fulled and felted fabrics and articles. (*Communicated by the Société Troty Latouche, frères.*)	1773	15th July 1863	Michael Henry.
An improved mode of producing raised patterns, figures or devices on felt hats, caps and bonnets.	1794	17th July 1863	Anne Catherine Veuve Durst-Wild.
Improvements in the manufacture of hats, caps and bonnets, and in apparatus employed therein. (*Communicated by Eugene Coanet.*)	2052	18th Aug. 1863	Richard Archibald Brooman.
Mode of and apparatus to be used in sewing by machinery. (*Straw hats, &c.*) (*Communicated by Charles Frederick Bosworth.*)	2151	31st Aug. 1863	Alfred Vincent Newton.
Manufacture of academic hats - - -	2456	7th Oct. 1863	Raphael Zox.
Improvements in the manufacture of saddles and harness, and in materials for and in ornamenting the same, which improvements are applicable for parts of carriages, dress and coverings for the head, and other articles.	2579	21st Oct. 1863	Thomas Charles Clarkson.
A new attachment to coverings for the head and to other articles of dress, for lighting matches. (*Communicated by Justus Osman Woods.*)	2627	24th Oct. 1863	George Haseltine.
Improvements in machinery or apparatus for the manufacture of bonnet and cap fronts, which improvements are also applicable to the production of ornamental effects to other trimmings for wearing apparel.	2685	30th Oct. 1863	William Gadd the younger.
Manufacture of hat or cap frames - - -	2734	4th Nov. 1863	Michel Luneau.
An improved mode of ornamenting hats and bonnets. (*Communicated by Valentin Chevy, junior.*)	2804	11th Nov. 1863	Anne Catherine Durst-Wild.
Shakos, military and other hats and caps -	2805	11th Nov. 1863	Henry Melton.
Improvements in the manufacture of neck-ties, cravats and waistbands, which improvements are also applicable to other articles of wearing apparel. (*For head dress.*)	2813	12th Nov. 1863	Benjamin Peake.
Bonnet front machines and apparatus connected therewith.	3127	11th Dec. 1863	Henry Kinsey.
HEATING AND EVAPORATING; REGULATING HEAT.			
Improvements in generating and condensing steam and evaporating liquids, and in the apparatus employed therein.	38	5th Jan. 1863	Humphrey Chamberlain.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
HEATING, &c.—*continued.*			
Improvements in the treatment of organic fecal and urinous matters, for the purpose of deodorizing the same, and in the preparation of a portable manure therefrom, and in the treatment of ashes or other refuse of combustion to be combined therewith, also for improvements in machinery to be employed in the manufacture of the said manure. (*Evaporating.*)	132	15th Jan. 1863	John Harrop.
Heating arrangements of stoves for drying woven fabrics.	244	28th Jan. 1863	Horatio Watson.
Apparatus for heating and warming - -	273	29th Jan. 1863	Gideon Blake.
Improvements in generating combustible gases and in the apparatus employed therefor - - (*For heating.*)	307	3rd Feb. 1863	William George Valentin. Frederick Levick.
Improvements in the production and generation of gases and in the apparatus connected therewith.	399	14th Feb. 1863	John Cronin Jeffcott.
Improvements in the method of and apparatus for separating the fibres of straw, wood and other vegetable substances, and extracting the gummy and coloring matters therefrom, to render them fit for paper stock or for other purposes. (*Communicated by Azel Storrs Lyman.*)	408	14th Feb. 1863	William Clark.
Apparatus for heating the blast in the manufacture of iron.	485	23rd Feb. 1863	William Henry Gauntlett.
Machinery for blocking and pressing hats and bonnets - - - - -	490	23rd Feb. 1863	John Davis Welch. Alfred Phippen Welch.
Improved means of imparting heat to fluids - -	509	24th Feb. 1863	George Augustus Huddart.
Improvements in pumping and forcing water and in apparatus for the same. (*Communicated by Barthelemy Louvié.*)	559	27th Feb. 1863	William Clark.
Improved arrangements for generating steam in steam-boilers and other vessels, and for heating the liquid contents thereof.	577	2nd March 1863	Owen Murrell.
An improved method of applying heat in the manufacture and refining of sugar, and in malting, hop drying, brewing, distilling and vinegar making.	584	2nd March 1863	Charles Garton.
A new or improved method of purifying the noxious vapours or gases given off from night soil or other similar substances during the heating, drying or evaporating of such substances -	606	4th March 1863	Thomas Henry Morrell. Joseph Williamson.
Improvements in the mode of and in the apparatus for producing gas for illuminating and heating purposes, parts of which improvements are also applicable for increasing the illuminating and heating power of ordinary lighting gas.	632	5th March 1863	William Henry Buckland.
Improvements in the manufacture of illuminating gas and in apparatus employed therein. (*Communicated by Dr. William Elmer.*)	638	6th March 1863	George Tomlinson Bousfield.
Heating horticultural buildings - - -	718	17th March 1863	Thomas Nottage Miller.
Heating the feed water of steam-boilers - -	763	23rd March 1863	John William Hughes Rothwell. Edmund James Rothwell.
Apparatus for lighting and heating - - -	764	23rd March 1863	William Johnston.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
HEATING, &c.—*continued.*			
Ovens and apparatus for heating the same - -	765	23rd March 1863	Thomas George Grant.
Improvements in steam-engines and boilers, part of which improvements is applicable to heating purposes.	825	31st March 1863	John Smethurst.
Steam-boilers - - - - (*Communicated by Edward Dickerson.*)	842	1st April 1863	George Tomlinson Bousfield.
Apparatus used for warming railway carriages - (*Communicated by Adrien Delcambre.*)	899	9th April 1863	Richard Kyrke Penson.
Improvements in super-heating steam and in apparatus connected therewith.	907	10th April 1863	Thomas Baldwin.
Improvements in boilers for heating buildings and in regulators for the same.	948	15th April 1863	Ambrose Marriott.
Improvements in steam-boilers and in regulating the admission of air into the furnaces of steam-boilers. (*Super-heating steam.*)	966	17th April 1863	John Goucher.
Improvements in furnaces which are principally applicable to the smelting of iron - -	972	18th April 1863	Charles William Siemens. Frederick Siemens.
Steam-boilers and apparatus connected therewith - (*Feed water heater.*)	1006	22nd April 1863	Gill Bridges Barber.
Manufacture of sulphate of soda - - - (*Heating the salt.*)	1012	23rd April 1863	Thomas Richardson. James Cochran Stevenson.
Certain improvements in apparatus for heating water in furnaces, flues and chimneys - -	1019	24th April 1863	John Knowles. Samuel Jackson.
Valves for water, steam and gas - - -	1031	25th April 1863	Albert Henry Clark. Henry Hope.
Constructing surface condensers and apparatus for heating and cooling fluids.	1052	27th April 1863	Julius Jeffreys.
Heating the contents of mash tuns - - -	1083	29th April 1863	Frederick Gretton.
Glass and other furnaces or kilns - - - (*For heating iron plates.*)	1189	12th May 1863	Thomas Warren.
Manufacture of thick plates of wrought iron for armour plates and other purposes - - -	1203	13th May 1863	James Edward M^c^Connell. George Hinton Bovill.
Generating heat and motive-power - - -	1220	15th May 1863	Benjamin Shillito. David Moor.
Improvements in coke ovens, and in building and heating ovens or retorts for generating coal gas connected therewith.	1287	22nd May 1863	George Stevens.
Chimneys, fire-places, stoves and flues for warming and ventilating apartments - - -	1296	23rd May 1863	Samuel Egan Rosser. Josiah George Jennings.
Improvements in the manufacture of certain descriptions of iron tubing, and in the means of producing and applying an ornamental case to the same, which said means are also applicable to the production of ornaments in metal for other purposes - - - - -	1300	23rd May 1863	Ferdinand Potts. John Key.
Heating of every industrial and private apparatus by means of the oxygen and hydrogen gases combined and obtained from the decomposition of water.	1313	25th May 1863	Hippolyte Benigne Girard.
Improved apparatus for pressing, smoothing and finishing garments or parts of garments. (*Heating irons with gas.*)	1343	28th May 1863	Frederick Osbourn.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
HEATING, &c.—*continued.*			
Improved apparatus for heating buildings by means of hot water.	1352	29th May 1863	George Henry Pierce.
Certain improvements in steam-engines, steam-boilers and steam heating apparatus.	1399	5th June 1863	Francis Alton Calvert.
Improvements in obtaining and applying motive-power and in apparatus for the same. (*Communicated by Antoine Merlanchon.*)	1449	11th June 1863	William Clark.
Apparatus for evaporating liquids - -	1522	17th June 1863	Alexander Samuelson.
Arrangement of apparatus for superheating steam in steam-boilers - - - - - -	1584	23rd June 1863	William Louis Winans. Thomas Winans.
An improved mode of evaporating through the combined agencies of heat and centrifugal force, and the machinery employed therein, more particularly applicable to saccharine solutions.	1649	2nd July 1863	William Miller.
Cooking apparatus - - - - - - -	1657	3rd July 1863	Henry Brinsmead.
Improvements in the manufacture of gas for lighting and heating purposes, and in apparatus connected therewith.	1673	6th July 1863	James Samuel.
Means of and apparatus for heating, melting, boiling, evaporating and other useful purposes.	1824	21st July 1863	Charles Stewart Duncan.
An improved warming pan - - - (*Communicated by Joseph Gineston.*)	1903	1st Aug. 1863	Richard Archibald Brooman.
Apparatus used for regulating the temperatures during the process of fermentation in the "union cask," "tunning cask" or "cleansing cask."	1916	3rd Aug. 1863	Hamilton Woods.
Furnaces for heating air, steam and other elastic fluids.	1928	5th Aug. 1863	Edward Alfred Cowper.
Evaporating and cooling - - -	1932	5th Aug. 1863	Charles Garton. Thomas Hill.
Improved apparatus for generating heat for smelting and other purposes.	1946	6th Aug. 1863	John Kirkham.
Furnaces for heating, flattening and annealing glass (*Communicated by Andrew Kesler Hay.*)	2022	15th Aug. 1863	George Davies.
Apparatus for manufacturing salt - -	2030	15th Aug. 1863	John Grantham.
Apparatus for heating and purifying water -	2087	22nd Aug. 1863	Louis Emile Constant Martin.
Apparatus for evaporating and distilling - -	2106	26th Aug. 1863	Jacques Louis Kessler.
Certain improvements in steam-engines and in the mode of utilizing steam. (*For heating buildings, &c.*)	2116	27th Aug. 1863	Francis Pragst.
Improvements in evaporating fluid solutions and in the machinery, apparatus or means employed therein.	2142	29th Aug. 1863	Alexander Rowand.
Improvements in apparatus for generating steam and for generating gases to be used for heating steam-boilers or for other purposes.	2144	29th Aug. 1863	Louis Emile Constant Martin.
Apparatus for cooking and for obtaining fresh water for use on shipboard and otherwise.	2158	1st Sept. 1863	George Russell.
An improvement in steam-engines - - (*Heating cylinder linings.*) (*Communicated by Henry Waterman.*)	2226	9th Sept. 1863	Alfred Vincent Newton.
Improved means of and apparatus for employing vapours, gases and the heat derived from combustible matters.	2241	11th Sept. 1863	Louis Meyer.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
HEATING, &c.—*continued.*			
Construction and application of apparatus and implements used for the purpose of heating, cooling and evaporating.	2253	14th Sept. 1863	Henry Riviere.
An improved method of and apparatus for consuming smoke, and heating and warming public and other buildings, and for drying purposes generally.	2266	16th Sept. 1863	Gabriel Lewal.
A new or improved combined coke oven and hot blast oven or apparatus.	2277	17th Sept. 1863	James McEwen.
Improvements in the manufacture of iron and steel, and in apparatus to be employed in such manufacture. (*Communicated by William Gerhardt.*)	2293	18th Sept. 1863	George Davies.
Improvements in furnaces for heating wheel hoops, applicable also for other similar purposes.	2355	24th Sept. 1863	Amos Firth.
Improvements in furnaces and fire-places applicable to the heating of steam-boilers and other purposes.	2375	26th Sept. 1863	Edward Brown Wilson.
Improved apparatus for heating by means of illuminating gas. (*Communicated by Paulin Amédé Charpentier.*)	2381	28th Sept. 1863	William Edward Gedge.
Means of uniting or joining plates or sheets of metal, which invention is applicable to the construction of boilers, tubes and other useful purposes. (*Generating and applying heat.*)	2549	17th Oct. 1863	Edward Henry Cradock Monckton.
Surface condensers for steam and other vapours - (*For warming houses by steam.*) (*Communicated by George Wagstaff Yapp.*)	2566	20th Oct. 1863	William Snell.
Improvements in evaporating, cooling and melting, and in apparatus employed therein - -	2575	20th Oct. 1863	Charles Garton. Thomas Hill.
Boilers and apparatus used for the generation of steam.	2592	22nd Oct. 1863	George Cutler, junior.
Improvements in the application of steam combined with air as a motive-power and for other purposes (*Heating the boiler.*)	2620	23rd Oct. 1863	James Parker.
Improvements in machinery employed in the manufacture of wool and hair felting. (*Communicated by Jesse Albert Locke.*)	2697	31st Oct. 1863	Henry Bernoulli Barlow.
Preparing or obtaining coloring matters - -	2739	5th Nov. 1863	Richard Smith.
Improvements in the manufacture of malleable iron and steel, and in the apparatus employed in such manufacture.	2746	5th Nov. 1863	Henry Bessemer.
Caloric or heated air-engines - - - (*Communicated by Henry Messer.*)	2806	11th Nov. 1863	Walter Davis Richards.
Preventing the escape of heat from steam-boilers and other heated surfaces.	2846	14th Nov. 1863	Edwin Hargraves.
Improvements in the manufacture of salt and in boilers to be fed by salt water. (*Communicated by Charles Louis Edouard Lequin.*)	2875	16th Nov. 1863	Richard Archibald Brooman.
Certain improvements in steam-boilers or generators	2890	18th Nov. 1863	John Stewart.
Improvements in steam-engines and in apparatus connected therewith. (*Communicated by Richard Bristol.*)	2927	20th Nov. 1863	John Henry Johnson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
HEATING, &c.—*continued.*			
Improvements in machinery for the manufacture of bolts, nuts, spikes and rivets, and also in furnaces for heating blanks to be formed into such articles	2936	21st Nov. 1863	Francis Watkins.
Improvements in the process and manner of making gas for illuminating, heating and other purposes, a part of which may also be applied to the production of metallic oxydes. (*Communicated by William Henry Gwynne.*)	3029	2nd Dec. 1863	Henry Holdrege.
Distillation or treatment of bituminous substances - (*Communicated by John Saunders.*)	3037	2nd Dec. 1863	Richard Archibald Brooman.
Improvements in gas stoves for heating irons and other purposes, and in the construction of irons to be heated and used therewith.	3042	3rd Dec. 1863	David Hulett.
Improvements in heating, parts of the invention being applicable to other purposes - -	3055	5th Dec. 1863	Samuel Alfred Varley. Cromwell Fleetwood Varley.
Improvements in obtaining and applying heat and in apparatus therefor, being also in part applicable for lighting - - - -	3057	5th Dec. 1863	William Gorman. John Paton.
Improvements in the application of heat to water and other fluids, and in apparatus for the same.	3069	7th Dec. 1863	Frederick Piercy.
Apparatus used for heating and ventilating horticultural buildings.	3094	8th Dec. 1863	Peter Rigby Wason.
Improvements in malt and hop kilns, which improvements are partly applicable to the ventilation and warming of buildings, and to the drying of various substances.	3124	11th Dec. 1863	Alexander Epps.
Improvements in fire-bars for the boilers of locomotive and other engines, and for fire-boxes and furnaces generally. (*Heating feed water.*)	3165	15th Dec. 1863	William Williams Box.
Apparatus for forging and tempering bayonet blades, files and other articles. (*Heating apparatus.*) (*Communicated by Hervey Waters.*)	3251	23rd Dec. 1863	George Tomlinson Bousfield.
Improvements in the arrangement of furnaces, flues and kilns for drying and burning bricks, tiles and other articles, and in the application of the heat from the kilns to boilers for generating steam.	3266	24th Dec. 1863	James Duckett.
Kilns for calcining ironstone and limestone - -	3273	28th Dec. 1863	John Gjers.
A new method of decorating or ornamenting register or other grate fronts and cheeks, hearths of fireplaces, fenders, and the exterior surfaces of hot air stoves, and coil cases enclosing hot water or steam pipes.	3278	28th Dec. 1863	William Wilson.
Apparatus for heating, boiling, evaporating and distilling.	3294	29th Dec. 1863	Jean Michel Vanderfeesten.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
HOISTS, CRANES, CAPSTANS, WINDLASSES; RAISING AND LOWERING HEAVY BODIES; RAISING FROM MINES; RAISING SUNKEN SHIPS.			
Portable and stationary crabs or cranes - -	441	18th Feb. 1863	John Barker. Edmund Moss.
Locomotive boring and winding engines - -	668	11th March 1863	Andrew Barclay.
An improved application of hydraulic apparatus for lowering full casks and other goods, and raising empty casks or vessels.	800	26th March 1863	Edward Easton.
An improved axletree with linked levers for lifting	812	28th March 1863	Alfred Blouin. Didier Nicolas Mercier.
Apparatus for the transport of goods - - (*Communicated by Paulin Gay.*)	946	15th April 1863	William Clark.
Improved apparatus for fixing drills, which invention is also applicable for fixing apparatus for raising, supporting and suspending weights and for other analogous purposes.	1029	25th April 1863	Leopold De Breánski.
Pulleys, capstans and other machines for raising weights and transmitting motive-power -	1032	25th April 1863	Thomas Aldridge Weston. Charles Vivian.
An improved apparatus for conveying goods either in bulk or otherwise, whether to or from the warehouse or vessel, having an inclined vertical or horizontal movement, to be worked either by pressure of air or by vacuum and atmospheric pressure.	1366	1st June 1863	Frederick Warwick Smith.
Improvements in apparatus for loading and unloading vessels, and for elevating and otherwise conveying sacks, casks and other packages, parcels or objects from one locality to another. (*Derrick.*)	1408	8th June 1863	Richard Wallis.
A combined machine for collecting and placing in rows, or collecting and elevating into a waggon or elsewhere, hay, corn or other agricultural produce.	1514	17th June 1863	John Banwell.
Improved fleeting hydrostatic machinery adapted to presses, dry docks, slips, or the moving or lifting of heavy masses, parts of which are applicable to the expressing of oil or other fluids.	1591	24th June 1863	Paul Rapsey Hodge.
Construction and maintenance of the permanent way of railways. (*Steam cranes.*)	1614	27th June 1863	Thomas Dunn.
Improvements in cranes and in dock gate and other crabs.	1710	9th July 1863	Percy Graham Buchanan Westmacott.
An improved guard or fence for coal, iron, stone or other pits, warehouse or other lifts, sack holes, or other places requiring a guard or fence.	1745	13th July 1863	Joseph Barton.
Apparatus for elevating straw and other agricultural produce.	1910	1st Aug. 1863	Thomas Fellowes. Henry Hemfrey.
Improved apparatus for extracting coal, ores or other minerals or substances from mines, which apparatus may be also employed for raising and lowering the workmen and their tools or implements. (*Communicated by Melchior Colson.*)	2110	26th Aug. 1863	William Edward Newton.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
Hoists, &c.—*continued.*			
Hydraulic apparatus - - - - (*Hoisting apparatus.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Separating and elevating apparatus for grain or granular matters.	2167	2nd Sept. 1863	Robert Young.
Apparatus for loading and unloading vessels, and raising, lowering and otherwise conveying sacks, casks, agricultural produce and other objects, from one locality to another.	2326	21st Sept. 1863	Richard Wallis.
Improved apparatus and arrangements for giving buoyancy to or raising sinking or submerged ships, and other sinking or sunken bodies.	2476	9th Oct. 1863	Enoch Watkin James.
Apparatus for sustaining and raising ships or vessels, applicable also as life buoys.	2668	30th Oct. 1863	George Rosselet.
Apparatus for raising and lowering bodies - (*Communicated by Friederich Klingenfeld.*)	2776	7th Nov. 1863	Charles Denton Abel.
Guy cranes and other similar cranes - -	2814	12th Nov. 1863	Joseph Booth. John Booth. Jeremiah Booth.
Carriages and apparatus for raising, removing and transporting heavy bodies from place to place.	2825	12th Nov. 1863	Douglass Munro Fyfe.
Windlasses - - - - - -	2904	19th Nov 1863	Edmund Walker.
An improved hoisting and lowering apparatus - (*Communicated by Jean Robin and Pierre Dumas.*)	2917	20th Nov. 1863	Charles Stevens.
Hydraulic apparatus for hoisting, lifting and pressing.	2953	24th Nov. 1863	Christian Schiele.
Raising or removing grain from one place to another.	3101	9th Dec. 1863	Henry Audinwood.
Improvements in raising sunken vessels and other submerged dead weights, and in preventing the sinking of vessels in case of accident at sea, and in the apparatus employed therein. (*Communicated by James M'Leod.*)	3142	12th Dec. 1863	John Henry Johnson.
Improved arrangements of apparatus or mechanism for rendering ships' cables less likely to part during heavy riding.	3144	12th Dec. 1863	Robert Saunders.
Improvements in apparatus for working railway signals and for raising and lowering signal lamps. (*Communicated by Jean Joseph Baranowski.*)	3178	16th Dec. 1863	Richard Archibald Brooman.
Lifts or machinery or apparatus for raising and lowering weights.	3240	22nd Dec. 1863	John Gjers.
Applying power to windlass and other barrels used for raising and lowering weights. (*Communicated by E. B. Requa.*)	3282	28th Dec. 1863	John Baldwin Cronin.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
HORSE-SHOES, SHOEING HORSES, ROUGHING HORSES.			
A new or improved method of roughing horses	158	19th Jan. 1863	Charles Norton.
Improvements in horse-shoes and in the method of fastening the same.	621	5th March 1863	William Wells.
Machinery or apparatus for forging and dressing horse-shoe and other nails. (*Communicated by Charles Alexandre Lourier.*)	1133	6th May 1863	George Davies.
Shoeing horses	1378	2nd June 1863	Thomas Page.
An improved apparatus for shaping plastic materials and hot but not melted metals, by means of pressure, percussion or rolling. (*Horse-shoes.*) (*Communicated by Kilbridge Wheeler.*)	1502	16th June 1863	Francis Stanton Williams.
Improvements in the manufacture of iron or other metal shoes, and in the method of securing the same to the hoofs of horses and other animals, without nails.	1534	19th June 1863	Samuel Middleton.
Improvements in preparing and fashioning iron applicable to the manufacture of boot heels, tips, and horse-shoes, and in part of the machinery or apparatus to be employed therein.	1576	23rd June 1863	Alexander Richmond Stocker.
Improvements in horse-shoes and in their fastenings.	1600	25th June 1863	Thomas Page.
Improvements in shoes for the feet of horses and other animals and in the means of connecting them.	1685	7th July 1863	George Bartholomew.
Horse-shoes	1807	18th July 1863	Frederick Joseph Mavor.
Roughing horses without taking off the shoe	2091	24th Aug. 1863	Henry Batt.
An improved method of shoeing horses and covering the feet or hoofs of other domestic animals with hardened india-rubber, gutta-percha and other improved similar materials.	2127	28th Aug. 1863	Louis Alexandre Mulet.
Horse-shoes	3041	3rd Dec. 1863	John Green.
HORTICULTURE, CONSERVATORIES, FLOWER STANDS, LAWN MOWING, TRAINING PLANTS, FUMIGATING PLANTS.			
Lawn-mowing machines	361	12th Feb. 1863	Alexander Morton.
Improvements in wrought-iron casements and in the means for fastening the same which improvements are also partly applicable to the framework of glass doors, conservatories and [illegible] (*Communicated by Lucas Piccard, Marcel Thomas Lucas, Jacques Jean Charles Lhomme and Charles Jules Lucas.*)	413	14th Feb. 1863	John Henry Johnson.
An improved method of preventing the destruction of [illegible]	478	21st Feb. 1863	Robert Valentine Dudgeon.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
HORTICULTURE, &c.—*continued.*			
A new agricultural implement for cultivating tubercles, roots and all oil plants. (*See* "PLOUGHING.")	580	2nd March 1863	Aimé François Pagny.
Improvements in horticultural buildings and other glazed structures, part of which improvements is also applicable to ventilating other buildings.	624	5th March 1863	John Miller.
Apparatus for indicating any regulated maximum or minimum degree of temperature. (*For conservatories.*) (*Communicated by Alexander Ross.*)	670	11th March 1863	John Werge.
Heating horticultural buildings - - -	718	17th March 1863	Thomas Nottage Miller.
Lawn-mowing, rolling and collecting machines -	1022	24th April 1863	John Cornes. John Coope Davis.
Improvements in the construction of garden pumps, part of which said improvements are applicable to fire-engines and other hydraulic machines - - - - - -	1107	2nd May 1863	John Thomas Oakley. Thomas Oakley.
Machinery for cutting or shearing the edges of grass or turf.	1185	11th May 1863	James Shanks.
Lawn-mowing and rolling machines - -	1248	19th May 1863	Charles Barnard. John Bishop. Charles Barnard, junior. Godfrey Barnard.
Improvements applicable to the ornamentation or decoration of articles of furniture, part of which improvements may also be applied for architectural ornamentation. (*Flower stands.*)	1471	12th June 1863	Thomas Charles March.
Construction of seats, chairs, sofas, lounges and other similar articles of furniture. (*Garden seats.*) (*Communicated by François Carré.*)	1687	7th July 1863	William Edward Gedge.
Construction of skylights and roof lights for railway stations, conservatories and other similar structures.	1714	9th July 1863	Robert Agate.
An apparatus for collecting fruit from trees without injury - - - - - -	1855	25th July 1863	Thomas Charles Bull. Thomas Morgan.
Portable fire and garden engines - - -	2321	21st Sept. 1863	William Burnet Robins.
Improvements in taps, cocks, hydrants or valves, and apparatus connected therewith, for opening, closing, regulating and facilitating and otherwise controlling the passage or flow of water, air, steam, gas and other fluids and liquids. (*For watering gardens.*)	2432	5th Oct. 1863	Charles Tomlison.
Lamps and stoves for the application of blast heat to horticultural, agricultural and other specified purposes.	2535	16th Oct. 1863	Frederick George Stuber.
An improved preparation of tobacco for fumigating purposes.	2662	28th Oct. 1863	Abraham Senior Coronel.
Improvements in composition or means for the purpose of destroying insects by fumigation, and in means or apparatus employed therewith -	2988	27th Nov. 1863	Samuel Smith. Thomas Smith.
Improvements in heating, parts of the invention being applicable to other purposes - - (*Conservatories.*)	3055	5th Dec. 1863	Samuel Alfred Varley. Cromwell Fleetwood Varley.
Apparatus used for heating and ventilating horticultural buildings.	3094	8th Dec. 1863	Peter Rigby Wason.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
HORTICULTURE, &c.—*continued.*			
Apparatus for regulating the passage of aëriform and other fluids. (*In conservatories.*) (*Communicated by Charles Joseph Louis Meynard.*)	3096	8th Dec. 1863	Michael Henry.
A certain improvement in apparatus for training hops.	3205	19th Dec. 1863	Frederick Woolcot Collins.
INKS AND INKSTANDS.			
The manufacture of a new ink - - -	1418	8th June 1863	Gustav Wilhelm Edward Friederich.
Improvements in protecting or preserving the silvering or quicking on glass, and in the manufacture of glass vessels for silvering or quicking. (*Inkstands.*) (*Communicated by Joseph Jules Anthoine and François Etienne Hyppolite Brossette.*)	1512	16th June 1863	Richard Archibald Brooman.
Improvements in treating oil from shale or other bituminous minerals, and similar oils, to obtain various products therefrom, and in apparatus therefor. (*Residue for making printing ink.*)	1564	22nd June 1863	John M^{c}Lean.
An improvement in inkstands - - -	1622	29th June 1863	Lucien Ezra Hicks.
Manufacture of ink - - - -	1819	20th July 1863	Joseph Goold.
Inkstands - - - - -	1945	6th Aug. 1863	Eugene Ehrenfried Quelle.
Pen and ink holders - - - -	2054	18th Aug. 1863	Jean Baptiste Vincent Faure.
An apparatus applicable to time, fare, distance and other tables, almanacs, arithmetical calculations, postal and other boxes. (*Applicable to inkstands.*)	2882	18th Nov. 1863	Thomas Christopher Kimpton.
A new and improved ink regulator and indicator -	3021	2nd Dec. 1863	George Macfarlane.
Improvements in the composition of ink suitable for printing and coloring or shading bank note and other instruments and documents, by the copper plate, lithographic, typographic, xylographic or other processes of printing. (*Communicated by Tracy Edson.*)	3204	19th Dec. 1863	Edward Thomas Hughes.
INLAYING; INLAID WORK.			
Construction or laying of wooden floors - - (*In patterns.*) (*Communicated by Edouard Hamelle.*)	657	9th March 1863	William Edward Newton.
A new and improved mode of inlaying gold and other metals in glass, and in a composition suitable for the manufacture of jewellery and other ornaments, buttons and other similar articles -	720	18th March 1863	William Charles Wild. James Henry Randel.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
INLAYING, &c.—*continued.*			
Ornamentation of papier mâché or other japanned wares, wood, ivory or other similar materials.	1145	7th May 1863	John Bettridge.
An improved method of making and inlaying encaustic tiles or other plastic articles and substances - - - - - - -	2176	3rd Sept. 1863	William Boulton. Joseph Worthington.
JEWELLERY, LOCKETS, BROOCHES, BRACELETS, WATCH CHAINS, SWIVELS AND KEYS.			
Fastenings for studs, sleeve fasteners, solitaires, bracelets, brooches and other uses.	434	17th Feb. 1863	James Wakeman Lane.
Bracelets and brooches - - - - -	591	3rd March 1863	Richard Henry Jones. John Abrahall.
Machinery for engraving by means of electricity - (*Jewellery.*)	633	6th March 1863	Michel Jourdin.
A new and improved mode of inlaying gold and other metals in glass, and in a composition suitable for the manufacture of jewellery and other ornaments, buttons and other similar articles -	720	18th March 1863	William Charles Wild. James Henry Randel.
Improvements in umbrellas, parasols, sunshades, walking-sticks and whips, and in brooches and other ornaments.	1452	11th June 1863	John Francis Kain.
Manufacture of mountings or settings for precious or other stones.	1554	20th June 1863	Alexander Theodore Nicholaus Goll.
Clasps or fastenings for securing brooches, solitaires and other dress ornaments.	1631	30th June 1863	Samuel Cole.
Pins, brooches, buckles and other ornaments to be applied to various articles of wearing-apparel.	2824	12th Nov. 1863	Philip Bettle.
An improved watch case pendant, applicable also to other articles. (*Lockets.*)	2943	23rd Nov. 1863	Charles Howard.
An improved mode of manufacturing joints and catches for brooches and other articles of jewellery.	3067	7th Dec. 1863	Alfred Antill. William Wilkinson.
Fastenings for brooches and other articles of jewellery.	3106	9th Dec. 1863	Thomas Perks.
Jewel, photograph, instrument and other cases -	3187	17th Dec. 1863	Charles Jeffreys.
Manufacture of bracelets and other ornaments formed of paper or papier mâché or other similar material - - - - -	3269	24th Dec. 1863	Thomas William Davenport. Samuel Cole.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
JOINING, JOINTING, COUPLING; PIPE JOINTS, RAILWAY JOINTS, FURNITURE JOINTS AND HINGES; PACKING FOR JOINTS.			
Manufacture of cornices, joints and laths of bedsteads and other articles of furniture.	235	27th Jan. 1863	Charles Frederick Ash.
An improved railway chair and joint for rails on railways.	236	27th Jan. 1863	Charles Askew.
A new or improved coupling and break for transmitting or regulating or arresting motion.	263	29th Jan. 1863	Thomas Aldridge Weston.
Couplings for railway carriages - - - (*Communicated by George Collyer.*)	282	30th Jan. 1863	William Edward Newton.
Mode of uniting metallic surfaces - - (*Communicated by William Brainerd Barnard.*)	313	4th Feb. 1863	George Haseltine.
Saddlery, harness, driving straps and similar articles	462	20th Feb. 1863	Charles Billingsley.
Improvements in insulating and protecting telegraphic and other wires and rods, and in machinery connected therewith.	505	24th Feb. 1863	William Hooper.
Apparatus for connecting and securing together planks of wood applicable to the building and caulking of ships and other vessels.	538	26th Feb. 1863	George Henry Lilley.
Improvements in traction engines and in apparatus for indicating the pressure of steam. (*Connecting with carriages.*)	669	11th March 1863	Andrew Barclay.
Certain improvements in looms for weaving -	726	18th March 1863	Henry Kilshaw.
Manufacture of boots and shoes - - - (*Communicated by Henry Port.*)	734	19th March 1863	George Haseltine.
An improved method of uniting earthenware, metal and other pipes.	784	25th March 1863	Thomas Wilson Gore.
Securing or connecting the bearing springs of railway carriages and wagons to the axle-boxes of the said carriages and wagons.	885	8th April 1863	John Nurthall Brown.
Machinery or apparatus for winding cotton, silk, wool or other threads on spools or reels.	1087	30th April 1863	John Wibberley.
Improved means of joining or fastening together lace, blond, quilling or similar materials.	1110	4th May 1863	John Fortune.
Improvements in sewing-machines and in apparatus connected therewith. (*Hinges for the covers.*)	1126	5th May 1863	Samuel Beach Cochran.
Improvements in coupling and disconnecting carriages on railways, and in machinery employed therein. (*Communicated by Bartolomé Castellvi.*)	1188	11th May 1863	Richard Archibald Brooman.
Improvements in the construction of piers, walls and other similar structures, and of landing stages, and in the connections therewith or attachments thereto. (*Obtaining water-tight joints.*)	1225	15th May 1863	Robert Trefusis Mallet.
Attaching copper or other sheathing to iron vessels	1273	21st May 1863	Frederic Pelham Warren.
Butt hinges - - - - - (*Communicated by William Henry Hayes.*)	1282	22nd May 1863	William Snell.
Steam-boilers - - - - -	1336	28th May 1863	William Irlam Ellis.
An improved loose clip and socket joint applicable to bedsteads, sofas, chairs and other articles of furniture and of fencing.	1348	29th May 1863	Eli Ironmonger.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
JOINING, &c.—*continued.*			
An improved construction of marline spike (*For splicing ropes.*) (*Communicated by Albin Warth.*)	1369	1st June 1863	Alfred Vincent Newton.
An improvement in needles (*Communicated by William Penn Hyde.*)	1424	8th June 1863	William Edward Newton.
Improvements in fire-bars for the boilers of locomotive and other engines, and for fire-boxes and furnaces generally.	1491	15th June 1863	William Williams Box.
Steam, gas and water tube joints	1517	17th June 1863	John Frederick Spencer.
Improvements in couplings for propelling shafts of ships or vessels	1556	20th June 1863	William Louis Winans. Thomas Winans.
Machinery for making chains or chain cables and rings.	1575	23rd June 1863	John Murray.
Improvements in the method and construction of a packing chiefly applicable to piston rods, pumps and such like, and for forming the joints of gas, steam or water pipes.	1597	25th June 1863	Abraham Ripley.
Using Apo-elastikon hyphrasma as a new and improved cloth for floors, roofs, walls, tanks and other linings, being impervious to damp and of great strength and durability. (*For making joints.*)	1603	25th June 1863	William Kirrage.
Construction and maintenance of the permanent way of railways.	1614	27th June 1863	Thomas Dunn.
Improvements in couplings for hose pipes and also in connecting axles to the naves or bosses of wheels. (*Communicated by Edmund Blodget Jucket.*)	1617	27th June 1863	Edward Thomas Hughes.
Improved methods of connecting lamp chimneys and other glasses or shades with the burners of lamps.	1623	30th June 1863	Frederick Jones Duggan.
An improved mode of and apparatus for manufacturing metallic joints for bedsteads, and the application of such joints to certain parts of bedsteads.	1634	1st July 1863	Thomas Alliston. Richard Swift.
Improvements in fencing land and in hanging gates (*Gate hinges.*)	1651	2nd July 1863	John King.
Spring hinges for swing doors	1689	7th July 1863	Samuel Robinson.
Improvements in piles for foundations and in piers for bridges and other buildings or structures.	1723	10th July 1863	Charles De Bergue.
Air and water beds, pillows, bolsters and cushions	1816	20th July 1863	Frederick Ayckbourn.
Carriage and other springs	1841	23rd July 1863	Andrew Taylor Holden.
Buffing and traction apparatus of railway carriages and waggons.	1889	30th July 1863	George Smith.
Furnaces for heating air, steam and other elastic fluids.	1928	5th Aug. 1863	Edward Alfred Cowper.
Improvements in pipe castings for gas, water, sanitary and other general purposes, and the introduction of an elastic chemical compound to form expansive joints thereto, for prevention of leakage.	1950	7th Aug. 1863	Frederick George Mulholland.
An improved apparatus whereby screw propellers may be made to steer as well as propel, applicable also as an improved ball and socket joint.	1955	7th Aug. 1863	Edward Watson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
JOINING, &c.—*continued.*			
Improvements in fastening and in securing in position the rails of railways, the said fastenings being applicable for other uses.	1966	8th Aug. 1863	John Ward Armstrong.
Improved means of conducting electric currents through railway trains, and of actuating signals or alarums therein. (*Mercurial joint.*)	2007	14th Aug. 1863	Andrew Edmund Brae.
An improved apparatus for the prevention, cure and relief of hernia of every description, together with prolapsus uteri, uterine hemorrhage, hernia humoralis, and as a general support for enlargement of the abdomen from whatever cause proceeding.	2045	18th Aug. 1863	Joseph Arthur.
Diving apparatus - - - - -	2118	27th Aug. 1863	James Ward.
Improvements in the construction of floating docks and pontoons, and the means of cleaning, painting or repairing them.	2196	5th Sept. 1863	George Banks Rennie.
Certain improvements in apparatus for preparing cotton and other fibrous materials for spinning.	2215	9th Sept. 1863	William Higgs Hawksworth.
Improvements in side lights for ships and other navigable vessels, and in the manufacture of the same.	2229	10th Sept. 1863	John Hays Wilson.
An improvement in hinges - - - -	2269	16th Sept. 1863	Alfred Watson.
Apparatus applied to railway carriages and trains in order to obtain greater safety to passengers.	2285	17th Sept. 1863	John Gottlieb Ulrich.
Joining leather - - - - - (*Communicated by Toussaint Landrin.*)	2361	24th Sept. 1863	Henri Adrien Bonneville.
An improved joint for the tubes of surface condensers. (*Communicated by John Van Voorst Booraem.*)	2363	25th Sept. 1863	Alfred Vincent Newton.
Parts of the permanent way of railways - - (*Communicated by Narcisse Antoine Brocot and Aimé Labarre.*)	2390	29th Sept. 1863	William Edward Gedge.
Couplings for railway carriages - - -	2406	1st Oct. 1863	James Bell.
Improvements in taps, cocks, hydrants or valves, and apparatus connected therewith, for opening, closing, regulating and facilitating and otherwise controlling the passage or flow of water, air, steam, gas and other fluids and liquids. (*Connecting stand pipes to hydrants.*)	2432	5th Oct. 1863	Charles Tomlison.
Construction of condensers - - - (*Communicated by William Judson.*)	2472	8th Oct. 1863	Alfred Vincent Newton.
Improvements applicable to metallic casks and in machinery for the manufacture of the same.	2496	12th Oct. 1863	Thomas Browning.
Permanent way of railways - - -	2503	12th Oct. 1863	Russel Aitken.
Improvements in apparatus for connecting chain cables and for clearing a ship's hawse when foul, and also in apparatus for acting on and presenting strain to the chain cables when ships are riding at anchor.	2527	15th Oct. 1863	Stephen Randoll Smith.
Means of uniting or joining plates or sheets of metal, which invention is applicable to the construction of boilers, tubes and other useful purposes.	2549	17th Oct. 1863	Edward Henry Cradock Monckton.
An improved construction of walking-stick umbrella (*Spring coupling.*)	2577	20th Oct. 1863	Thomas Restell.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
JOINING, &c.—*continued.*			
Certain improvements in mules for spinning and doubling.	2578	21st Oct. 1863	William Hartcliffe.
Portable cooking apparatus - - -	2672	28th Oct. 1863	Robert Baker Jones.
Improvements in the making of safety paper and in the machinery or apparatus employed therein.	2700	31st Oct. 1863	William Tasker the younger.
Breech-loading fire-arms and ordnance - - (*Communicated by Jacob Snider, junior.*)	2773	7th Nov. 1863	George Stephen Melland.
Improvements in taps or valves, in pipe joints, and in the valvular mechanism of water-closets -	2865	16th Nov. 1863	Samuel Cameron. William Johnston.
Improvements in the manufacture of metal drums and cans for holding oils and other fluid matters, and in furnaces used in such manufacture.	2911	19th Nov. 1863	William Benjamin Hodson.
Apparatus used for connecting railway carriages and trucks.	2920	20th Nov. 1863	Giardinelli Spooner Kirkman.
Connecting scaling, fire and other like ladders -	2923	20th Nov. 1863	George Fawcus.
Improvements in testing or measuring the strength and other properties of various materials and structures, and in apparatus therefor. (*Rivetted plate joints.*)	2970	26th Nov. 1863	David Kirkaldy.
Means of fitting together or connecting articles or parts of articles.	2992	28th Nov. 1863	Eli Ironmonger.
Improvements in the construction of sluice and other cocks or valves, and in the means of connecting them and the ends of flexible hose pipes together.	3003	30th Nov. 1863	Charles Pontifex.
Improvements in the construction and working of electric telegraphs and in apparatus connected therewith, partly applicable to other purposes.	3006	1st Dec. 1863	Henry Wilde.
Improvements in sewing-machines and in apparatus connected therewith.	3020	1st Dec. 1863	Samuel Beach Cochran.
An improved mode of manufacturing joints and catches for brooches and other articles of jewellery - - - - - - -	3067	7th Dec. 1863	Alfred Antill. William Wilkinson.
Metallic packings - - - - (*For closing joints.*)	3088	8th Dec. 1863	Theophilus Alexander Blakely.
Construction and mode of attaching of india-rubber and other composition soles to boots and shoes or to the uppers thereof. (*Communicated by Charles MacBurney.*)	3141	12th Dec. 1863	John Henry Johnson.
Improvements in fire-bars for the boilers of locomotive and other engines, and for fire-boxes and furnaces generally.	3165	15th Dec. 1863	William Williams Box.
Breech-loading fire-arms - - - -	3308	31st Dec. 1863	Aungeir Byrnes. Henry Benjamin.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
KNIVES, FORKS, SPOONS, SCISSORS, SHEARS; CLEANING KNIVES, FORKS AND SPOONS.			
Knife-cleaning apparatus - - - - -	336	6th Feb. 1863	Alexander Clark.
Improvements in machinery for the cutting of chives, bungs, corks, spiles and vent or other pegs, and also in machinery for manufacturing the knives or cutters employed therein, such machinery being also applicable to the manufacture of tre-nails and other cylindrical and conical articles.	352	7th Feb. 1863	George Redrup.
Manufacture and securing of cutlery handles and machinery employed therein - - - -	498	24th Feb. 1863	William Whitehead. Henry Whitehead. Henry Barber.
Manufacture of spoons and forks - - - (*Communicated by Wilhelm Conraetz and Fritz Dittler.*)	723	18th March 1863	Richard Archibald Brooman.
An improved haft or handle for holding tools or instruments of various sizes. (*Chisels.*)	895	9th April 1863	Francis Joseph Risse.
Manufacture of spoons and forks - - - -	1048	27th April 1863	Jean Joseph Robert.
Construction of scissors - - - - -	1169	9th May 1863	Narcisse Legendre.
Improvements in frames, tips and bolsters used in cutlery, and in securing handles or scales therein or thereto.	1253	19th May 1863	Richard Bunting.
Improvements in apparatus and implements for cleaning spoons and forks.	1549	20th June 1863	George Brixey.
An improved cork cutting machine - - - (*Communicated by Edward Borie and Alexander Mackie.*)	1619	29th June 1863	George Davies.
Improvements in shears for cutting metal and other substances.	2140	29th Aug. 1863	Frederick Charles Phillip Hoffmann.
Machinery or apparatus for grinding and polishing metallic articles. (*Knives.*)	2143	29th Aug. 1863	James Dodge.
Hydraulic apparatus - - - - - (*Shears.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Improvements in shears for cutting metal threads, wires and rods, applicable also for gauging wires. (*Communicated by Leon Gauchez.*)	2323	21st Sept. 1863	Emile Alcan.
Improvements in brick and tile making machinery, applicable also to machinery for manufacturing other articles from plastic materials - - (*Revolving knife.*)	2337	22nd Sept. 1863	John Bond. James Bond.
Improvements in shears for cutting metals and other substances. (*Communicated by Hugues François Aubert.*)	2501	12th Oct. 1863	William Edward Gedge.
Improvements in self-acting machinery or apparatus worked by steam or other power, for cutting and shaping the soles and heels of boots and shoes, and screwing them on to the uppers or coverings, and also in vices for holding the same, and tools for paring, blacking and glazing or otherwise ornamenting the edges of the soles and heels - - - - - -	2755	6th Nov. 1863	Charles Henry Southall. Robert Heap.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
KNIVES, &c.—*continued.*			
Improvements in the knives used for the cylinders and blocks of rag-cutting or beating engines, the same arrangement of knives being also applicable to the crushing or beating of other substances. (*Communicated by F. Meyer.*)	3238	22nd Dec. 1863	William Edward Gedge.
Cutlery handles - - - - - -	3257	24th Dec. 1863	Henry Barber.
LAMPS, LANTERNS, CHANDELIERS, CANDLESTICKS; LAMP FURNITURE, GLASSES AND SHADES; LIGHTING.			
An improvement or improvements in glasses for lamps used in ships, railway carriages, and for other like purposes.	10	1st Jan. 1863	William Robinson.
An improvement in lighting halls, theatres and other buildings.	31	5th Jan. 1863	Enoch Bassett Keeling.
Certain improvements in fixed and portable lights for domestic and other uses, applicable for burning gas and the mineral oils or spirits now so commonly used.	105	13th Jan. 1863	John Thomas Stroud.
Railway, ship and other lamps - - -	129	15th Jan. 1863	Edward Howes.
Improvements in apparatus for casting or moulding articles in glass and in imitation of precious stones or marbles. (*Globes for lamps.*)	184	21st Jan. 1863	Adolphe Boubee.
Lamps - - - - - - -	242	27th Jan. 1863	William Crane Wilkins.
Glasses termed chimneys used for gas or other lights.	264	29th Jan. 1863	Jean Baptiste Emile Louit aîné.
Reflectors - - - - - (*Communicated by Pierre Thibault.*)	306	3rd Feb. 1863	William Edward Newton.
Means or apparatus for effecting a regular supply of air or aëriform fluids for various purposes. (*For photogenic gas lights.*)	335	6th Feb. 1863	George Stevens.
Signal lanterns suitable for being used in open boats.	339	6th Feb. 1863	John Price.
Shades or reflectors for lighting purposes - -	351	7th Feb. 1863	Matthew Hackforth.
Signalling on railways - - - -	423	16th Feb. 1863	Samuel Wesley Clough.
Improved appliances for displaying in the open air or indoors illuminated designs, devices, mottoes or announcements, and in which jets of gas are employed as the illuminating agent -	449	18th Feb. 1863	Josiah Puntis. George Cox.
Manufacture of oil lamps - - - -	454	19th Feb. 1863	Louis Auguste Pouget.
Improvements in lamps and burners, and in apparatus employed for milling or ornamenting parts of lamps, which apparatus may also be applied to other similar uses.	491	23rd Feb. 1863	Ralph Martindale.
Improvements in lamps for burning petroleum and other similar oils, and in feeders or cans for supplying such oil to lamps. (*Communicated by Noel Bosselut.*)	519	25th Feb. 1863	Richard Archibald Brooman.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
LAMPS, &c.—*continued.*			
Pressure and pump lamps - - - (*Communicated by Isaac Van Bunchoton.*)	609	4th March 1863	Edward William Binney.
Certain improvements in lamps - - -	626	5th March 1863	Thomas Westwood Osborne.
Improvements in moderator lamps to adapt them to the burning of petroleum and other mineral oils and hydro-carbons. (*Communicated by Louis Martin.*)	663	11th March 1863	John Cassell.
Lamps and lamp wicks - - - (*Partly communicated by David Eldon Hall.*)	747	20th March 1863	Vasconcellos Houghton.
Improvements in the construction of lamps with circular burners or wicks for the combustion of petroleum, schist and other volatile oils, parts of said improvements being applicable to gas burners, night lights, and lamps burning spirits and animal oils.	755	21st March 1863	Charles De Groote.
A new combined range for making gas, cooking by gas and lighting, especially applicable for ships.	762	23rd March 1863	Henry Hancock.
Apparatus for lighting and heating - -	764	23rd March 1863	William Johnston.
Lamps for burning light and heavy mineral and vegetable oils. (*Communicated by Etienne Laporte.*)	941	14th April 1863	Richard Archibald Brooman.
Lamps - - - - - (*Communicated by Robert Cornelius.*)	983	20th April 1863	William Edward Newton.
Improvements in the manufacture of and in the machinery and appliances for holding, drilling, turning, tapping, fitting and shaping certain parts of steam, water, gas and lamp fittings.	1041	25th April 1863	John Thomas Stroud.
A new and useful or improved submarine lantern to be used in explorations beneath the surface of the ocean or any other large body of water.	1065	28th April 1863	George Washington Fuller.
Construction and arrangement of shades and reflectors for gas lights.	1117	5th May 1863	Robert George Kent.
Lamps - - - - -	1125	5th May 1863	William Crane Wilkins.
Miners' lamps - - - -	1140	7th May 1863	Peter Bourne.
An improved mechanical movement for producing an impelled current of air for lamps, and which may be used for other purposes. (*Communicated by Francis Bernard de Keravenan.*)	1154	8th May 1863	Joseph Henry Bailey.
Railway roof lamps, station, signal and other fountain lamps.	1207	13th May 1863	Anthony Gapper Southby.
Wicks for oil and other fluid burning lamps - (*Communicated by Henry Coulter.*)	1213	14th May 1863	John Thomson King.
Lamps - - - - - -	1230	16th May 1863	James Hinks.
An improved mechanical lamp - - -	1257	19th May 1863	Lasslo Chandor.
An improvement in lamps - - -	1259	19th May 1863	Lasslo Chandor.
Construction of signal lanterns or lamps - -	1272	21st May 1863	William Nunn.
Lamps for burning hydro-carbon oils - - (*Communicated by Louis Martin.*)	1305	23rd May 1863	George Smith.
Miners' lamps - - - -	1444	10th June 1863	Joseph Brooke.
Apparatus for obtaining artificial light from volatile liquids or fluids - - - -	1445	10th June 1863	William Wells. John William Myers.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
LAMPS, &c.—*continued.*			
Improvements in protecting or preserving the silvering or quicking on glass, and in the manufacture of glass vessels for silvering or quicking. (*Lamp reservoirs.*) (*Communicated by Joseph Jules Anthoine and François Etienne Hyppolite Brossette.*)	1512	16th June 1863	Richard Archibald Brooman.
An improved method of rendering atmospheric air fit for illuminating purposes, and of increasing the illuminating power of inflammable gas.	1532	19th June 1863	Henry Reynolds.
Improvements in the ornamentation of silver, German silver, Britannia metal, electro plated or other plated goods. (*Candlesticks.*)	1595	24th June 1863	Thomas Skinner.
Improved methods of connecting lamp chimneys and other glasses or shades with the burners of lamps.	1623	30th June 1863	Frederick Jones Duggan.
An improvement or improvements in candlesticks -	1658	3rd July 1863	Henry Thomas.
Improvements in lamps and in the wicks used in such lamps - - - - - -	1682	7th July 1863	Louis Joseph Guichard. Germain François Joseph Lefebvre.
Diverse lamps - - - - -	1699	8th July 1863	Anthony Gapper Southby
Apparatus for suspending chandeliers, gaseliers and other weights. (*Communicated by Eugene Frederic Piat and Theodore Auguste Baudrit.*)	1749	13th July 1863	Richard Archibald Brooman.
Improvements in fishing and in the apparatus or means to be employed therein. (*Communicated by John d'Atouquia de Franca-Netta.*)	1751	13th July 1863	Pierre Charles Alexandre Iodocius.
Attaching the burners of paraffine and other lamps to the founts or oil containers.	1769	15th July 1863	David Pitcairn Wright.
Improvements in the manufacture of pillars, posts, columns, mouldings and buildings when corrugated metal is employed, and in machinery used in corrugating, moulding and shaping metal for such purposes. (*Lamp-posts.*)	1792	16th July 1863	Edwin Maw.
Coal oil lamps - - - - - (*Communicated by Michael Boyd Dyott.*)	1865	27th July 1863	George Haseltine.
Lamps - - - - - - - -	1877	29th July 1863	Paul Hyacinthe Girardin.
Railway lamps - - - - - -	1895	31st July 1863	Joseph Pope Culverwell.
Lamps - - - - - - - -	1915	3rd Aug. 1863	Joseph Imbert. Prosper Bonnet. Jean Pfister.
An improved lamp for burning coal oil and other similar hydro-carbons, without the aid of a draught chimney. (*Communicated by Woolsey George Stirling and Nathaniel Wheeler.*)	1996	12th Aug. 1863	William Clark.
An improved ventilating gas lamp or gasalier -	2074	21st Aug. 1863	James France Hill.
Safety lamps for mines - - - - (*Communicated by François Chapuis and Léonce Decombette.*)	2256	14th Sept. 1863	William Edward Gedge.
Lamps and lamp wicks - - - - (*Communicated by David Eldon Hall.*)	2305	18th Sept. 1863	Vasconcellos Houghton.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
LAMPS, &c.—*continued.*			
Improvements in apparatus for supplying gas to railway carriages and other moving structures, and in apparatus for manufacturing and holding gas in ships and other vessels, parts of such apparatus being also applicable for manufacturing and holding gas elsewhere - -	2374	26th Sept. 1863	William Malam. William Tice.
An improved wax light or candle stand - -	2378	28th Sept. 1863	Pierre Bourchani.
Improved apparatus for heating by means of illuminating gas. (*Communicated by Paulin Amédé Charpentier.*)	2381	28th Sept. 1863	William Edward Gedge.
Barometers, gas regulators and other apparatuses for regulating and indicating the flow and pressure of liquids and fluids - - - - (*Lighting church clocks.*)	2383	28th Sept. 1863	John Bailey. George William Blake. William Henry Bailey.
Improvements in lamps especially applicable to the burning of hydro-carbons. (*Communicated by William Painter.*)	2453	7th Oct. 1863	Charles Pomeroy Button.
Vapour bath apparatus - - - - (*Lamp holder.*)	2473	9th Oct. 1863	Louis Lefebvre.
Manufacture of lanthorns - - -	2491	10th Oct. 1863	Thomas Hughes.
Lamps and stoves for the application of blast heat to horticultural, agricultural and other specified purposes.	2535	16th Oct. 1863	Frederick George Stuber.
Improvements in the manufacture of chandeliers, lamps and other apparatus employed in distributing light.	2701	31st Oct. 1863	James Rennie.
Lanterns and lamps for the same - - -	2741	5th Nov. 1863	William Proger.
Lamps for burning oils - - - (*Communicated by Florimond Baudoin.*)	2777	7th Nov. 1863	Henry Wickens.
Apparatus used in gas lighting - - -	2800	11th Nov. 1863	William Renwick Bowditch.
The manufacture and application of gases to aid in the lighting of railway carriages, separately or conjointly, omnibuses or other carriages, ships, steamboats or other such like vessels, lighthouses, or other places where portable gas apparatus may be required.	2966	25th Nov. 1863	Edward Bevan.
Improvements in the construction and working of electric telegraphs and in apparatus connected therewith, partly applicable to other purposes. (*Applicable for producing electric light.*)	3006	1st Dec. 1863	Henry Wilde.
Apparatus for lighting and heating - - (*Communicated by Bernard Subra.*)	3015	1st Dec. 1863	William Clark.
Apparatus for lighting and ventilating - -	3033	2nd Dec. 1863	Joseph Cutler.
Improvements in obtaining and applying heat and in apparatus therefor, being also in part applicable for lighting - - - -	3057	5th Dec. 1863	William Gorman. John Paton.
Lamps for burning hydro-carbons - - -	3130	11th Dec. 1863	John Cliff.
Apparatus to be applied to lamps - - - (*Shade or screen.*)	3146	12th Dec. 1863	Walter Thomas Whitmore Jones.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
LAMPS, &c.—*continued.*			
Improved apparatus for fixing candles upright in candlesticks. (*Communicated by Emile Daire.*)	3247	23rd Dec. 1863	William Edward Gedge.
Improvements in supplying air to lights in mines, and in the apparatus employed for that purpose.	3265	24th Dec. 1863	William Renwick Bowditch.
For Lamp Burners, *see* "GAS BURNERS."			
LEATHER, SKINS AND HIDES; ARTIFICIAL LEATHER AND PARCHMENT; CURRYING, TANNING, CUTTING AND ORNAMENTING LEATHER.			
A new method of making leather from waste pieces of common leather.	50	6th Jan. 1863	George Turner.
Rendering drum skins and gut strings less liable to hygrometric influences.	222	24th Jan. 1863	Antoine Joseph Sax.
Improvements in the manufacture of leather and in machinery for that purpose.	311	4th Feb. 1863	Thomas Edward Tallent.
Presses for punching or cutting out leather and other substances.	430	17th Feb. 1863	Josiah Gimson.
An improved method of and apparatus for glazing morocco leather.	540	26th Feb. 1863	Ange Capello.
Certain improvements in the method of producing surfaces in imitation of woods, and in printing therefrom. (*Figuring leather.*)	779	25th March 1863	Joseph Hardman Worrall.
Improvements in tanning and in apparatus employed therein.	832	31st March 1863	Henry Hamer.
Manufacture of mill straps and driving bands -	1046	27th April 1863	George Spill. Thomas James Briggs. Daniel Spill.
Improvements in dyeing and staining fabrics, parts of which improvements are also applicable for dyeing, staining and ornamenting glass and other substances.	1057	27th April 1863	Alexander Rollason.
Tanning hides and skins - - - (*Communicated by Jean Baptiste Vanrymenant.*)	1157	8th May 1863	Evariste Chamonin Boët.
Improvements applicable to the defending of ships or vessels and forts when armour plating is employed.	1171	9th May 1863	John Bland Wood.
Manufacture of waterproof fabrics - - (*Furred leather.*) (*Communicated by John Foster Greene.*)	1288	22nd May 1863	William Edward Newton.
Improved machinery for the manufacture of waterproof fabrics. (*Communicated by John Foster Greene.*)	1289	22nd May 1863	William Edward Newton.
The preparation of a fluid for renewing the surface of japanned and enamelled leathers and cloths.	1298	23rd May 1863	William Hoey.
Apparatus for printing fabrics, papers and other surfaces in colors. (*Communicated by Joseph Saroglia.*)	1365	1st June 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
LEATHER, &c.—*continued.*			
The application of leather in the manufacture of gentlemen's scarfs and ties.	1374	2nd June 1863	John Henry Brierley.
Currying and finishing of leather - - - (*Communicated by Benjamin Head Lightfoot.*)	1466	12th June 1863	George Davies.
An improved method or process for obtaining patterns and designs for the arts and manufactures. (*Ornamenting leather.*) (*Communicated by Thomas James Hussey.*)	1566	22nd June 1863	Francis Boult.
Using Apo-elastikon hyphrasma as a new and improved cloth for floors, roofs, walls, tanks and other linings, being impervious to damp and of great strength and durability. (*Substitute for leather.*)	1603	25th June 1863	William Kirrage.
An improved composition for waterproofing, softening and preserving all kinds of leather and articles made therefrom.	1648	2nd July 1863	Edward Lloyd.
Treatment and preservation of skins of all kinds - (*Communicated by Leonard Laureau.*)	1654	3rd July 1863	William Edward Newton.
Manufacture of hollow cutting tools - - (*For cutting out leather.*)	1808	20th July 1863	William Simpson. John Hutton.
Manufacture of mats, floor cloths or coverings for floors, straps, bands, ropes, and other analogous articles which are usually made of textile or fibrous materials. (*Making from strips of leather.*) (*Communicated by Placide Peltereau.*)	1831	21st July 1863	William Edward Newton.
An improved method of and apparatus for glazing morocco leather.	2095	24th Aug. 1863	Ange Capello.
Machines for working and preparing skins - (*Communicated by André Adler.*)	2209	8th Sept. 1863	Richard Archibald Brooman.
Joining leather - - - - (*Communicated by Toussaint Lcndrin.*)	2361	24th Sept. 1863	Henri Adrien Bonneville.
Perforating machines - - - - (*For leather, &c.*)	2496	12th Oct. 1863	John Heap.
Improvements in shears for cutting metals and other substances. (*Leather.*) (*Communicated by Hugues François Aubert.*)	2501	12th Oct. 1863	William Edward Gedge.
Machinery for cutting and finishing the edges of the soles and heels and the bottoms of boots and shoes.	2505	12th Oct. 1863	James John Anderton.
A new material for tanning - - - (*Communicated by Antoine François Michel.*)	2607	22nd Oct. 1863	Richard Archibald Brooman.
Machinery for ruling or marking leather - -	2717	3rd Nov. 1863	Ralph Eaton.
Improvements in and apparatus for the conversion of ropes and other cordage into oakum, tow and paper stuff, parts of which are applicable to teasing and cleaning wool or hair on skins, and dressing "waste" tow, wool, hair and other "waste" fibres.	3246	23rd Dec. 1863	James Ronald.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
LOCKS, LATCHES, BOLTS, LOCK FURNITURE; SAFES AND STRONG BOXES.			
Improvements in locks and in the modes of connecting the knobs and spindles of the same.	73	9th Jan. 1863	Walter Henry Tucker.
Manufacture of padlocks and other locks and their keys.	109	13th Jan. 1863	Matthew Tildesley.
An improved alarum apparatus which may be employed in connection with locks or other fastenings. (*Communicated by George Henry Sanborn.*)	131	15th Jan. 1863	Thomas Critchley Barraclough.
Certain parts of staples, locks, bolts, latches and other similar fastenings.	228	26th Jan. 1863	Andrew Smith.
Locks - - - - - - -	347	7th Feb. 1863	Claude Parigot. Antoine Grivel.
Locks - - - - - - -	417	16th Feb. 1863	William Charles M^{c}Entee. George Withers. Thomas Withers.
Burglar-proof safes and strong-room doors and frames - - - - - - -	594	3rd March 1863	George Price. William Dawes.
Improvements in the construction of locks and in the method of adjusting their spindles.	790	26th March 1863	Michael Leopold Parnell.
Locks - - - - - -	934	14th April 1863	George Berry.
Locks - - - - - -	951	15th April 1863	John Sanderson Morton.
Improvements in the construction of locks applicable to despatch and other boxes, writing and dressing cases or other similar receptacles.	959	16th April 1863	William Oldfield.
An improved fastening - - - - -	1606	25th June 1863	Alfred Watson.
Construction of locks and fastenings - - (*Communicated by Randolph Foster.*)	1702	8th July 1863	William Edward Newton.
The improvement of mortice and other door locks and latches.	1870	28th July 1863	Maurice Cockerell.
Money tills - - - - -	1973	11th Aug. 1863	James Robson, junior.
Locks or fastenings - - - - - (*For bags.*)	2013	14th Aug. 1863	Frederick John Jones.
Bolts for fastening doors, windows, shutters, and for other like purposes.	2173	3rd Sept. 1863	Charles Jackson.
Improvements in the manufacture of purses, pocket-books and wallets, and in the construction of double action locks for the same and other similar purposes.	2565	20th Oct. 1863	James Michaelis.
Locks for bags - - - - - -	2637	26th Oct. 1863	Bernhard Steinmetz.
Improvements in the construction of iron and other ships, vessels and batteries of war, and of cupolas and armour plates applicable thereto, parts of which improvements are also applicable to other useful purposes. (*Composition or filling applicable to safes.*)	2690	30th Oct. 1863	Barnabas Russ.
A new system of fastening for doors, windows, safes, chests and other similar purposes -	2742	5th Nov. 1863	Henry Hancock. William Henry Vickers, junior.
Tills or receptacles for money - - -	2851	14th Nov. 1863	George Henry Courtney.
An improved apparatus for closing and fastening gates, doors and things of that description.	2934	21st Nov. 1863	Ludovic D'Estienne de Saint Jean.
Fastenings for doors - - - - -	3109	9th Dec. 1863	Mark Hillary.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
LOOKING-GLASSES AND FRAMES.			
Modes or means for framing pictures, looking-glasses and other objects. (*Communicated by Antoine Auvray.*)	713	17th March 1863	William Edward Gedge.
Improvements applicable to the ornamentation or decoration of articles of furniture, part of which improvements may also be applied for architectural ornamentation. (*And mirror frames.*)	1471	12th June 1863	Thomas Charles March.
Improvements in protecting or preserving the silvering or quicking on glass, and in the manufacture of glass vessels for silvering or quicking. (*Communicated by Joseph Jules Anthoine and François Etienne Hyppolite Brossette.*)	1512	16th June 1863	Richard Archibald Brooman.
Mode of preserving and protecting the silvering of mirrors. (*Communicated by Diodor Briansky.*)	1721	10th July 1863	Marc Antoine François Mennons.
MANGLING, IRONING, GOFFERING, ROUCHING.			
Machinery and apparatus for the manufacture of trimmings and cap fronts	175	20th Jan. 1863	Hesketh Hughes. James Sanders.
Machinery or apparatus for washing, wringing and mangling clothes or other textile fabrics.	312	4th Feb. 1863	Thomas Bradford.
A new or improved apparatus for creasing or marking rouches.	563	28th Feb. 1863	George Royle.
An improved machine or apparatus for washing, squeezing, mangling and churning.	943	15th April 1863	James Leach.
Certain improvements in machinery or apparatus used in the processes or operations of drying, dressing, brushing, waxing and finishing fabrics. (*Or ironing.*)	1210	14th May 1863	Thomas Lawrence.
Improved apparatus for pressing, smoothing and finishing garments or parts of garments.	1343	28th May 1863	Frederick Osbourn.
Smoothing irons (*Communicated by the Society Jean Charles and Company.*)	1406	5th June 1863	John Henry Johnson.
Hydraulic apparatus (*Used for goffering.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Portable mangling and wringing apparatus	2200	7th Sept. 1863	Harper Twelvetrees.
Machinery for stretching woven fabrics	2333	22nd Sept. 1863	Joseph Renshaw. John Haworth.
Machinery or apparatus for the manufacture of bonnet and cap fronts, which improvements are also applicable to the production of ornamental effects to other trimmings for wearing-apparel.	2685	30th Oct. 1863	William Gadd the younger.
Apparatus used for pressing and ironing garments	2961	24th Nov. 1863	Peter Tait.
Improvements in gas stoves for heating irons and other purposes, and in the construction of irons to be heated and used therewith.	3042	3rd Dec. 1863	David Hulett.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MANGLING, &c.—*continued.*			
Bonnet front machines and apparatus connected therewith.	3127	11th Dec. 1863	Henry Kinsey.
Washing, wringing and mangling machines -	3128	11th Dec. 1863	Nicholas Walton.
MANTEL-PIECES.			
Hardening and colouring gypseous limestone and sand and calcareous stones. (*For mantel-pieces.*) (*Communicated by Pascal Nicolas Balthazar Fioravanti.*)	940	14th April 1863	Richard Archibald Brooman.
Manufacture of various articles with surfaces in imitation of different kinds of marbles or similar ornamental materials - - - (*Chimney-pieces.*)	1863	27th July 1863	Frederick Ford. Lewis Ford.
MANURE; TREATING SEWAGE.			
Improvements in the treatment of organic fecal and urinous matters for the purpose of deodorizing the same, and in the preparation of a portable manure therefrom, and in the treatment of ashes or other refuse of combustion to be combined therewith, also for improvements in machinery to be employed in the manufacture of the said manure.	132	15th Jan. 1863	John Harrop.
Improvements in the treatment of night soil and other waste products, and for the manufacture of manure therefrom.	321	4th Feb. 1863	James Alexander Manning.
Apparatus for raising sewage and water - - (*See* "DRAINS.")	470	20th Feb. 1863	William Husband. Joseph Quick.
A new or improved method of purifying the noxious vapours or gases given off from night soil or other similar substances during the heating, drying or evaporating of such substances. -	606	4th March 1863	Thomas Henry Morrell. Joseph Williamson.
Improvements in treating seaweed and in apparatus therefor. (*As manure.*)	607	4th March 1863	Edward Alfred Wünsch.
Treatment of rags and obtaining valuable chemical products from the animal fibre therein. (*Manure.*)	731	18th March 1863	William Lorberg.
Separation or obtaining of ammonia from azoted matters in the preparation of manure. (*Communicated by Lucien Henry Blanchard and Théodore Chateau.*)	761	21st March 1863	William Clark.
Apparatus for collecting the solid portions of sewage.	953	15th April 1863	Thomas Bell Elcock Fletcher.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MANURE, &c.—*continued.*			
Treating the waste liquors from bleaching powder stills in order to obtain hydrochloric acid and other products therefrom. (*Used to purify sewage.*)	967	17th April 1863	Robert Calvert Clapham.
Manufacture of manure - - - - (*Communicated by Alfred François Mosselman.*)	1362	30th May 1863	William Clark.
Treating and preparing night soil and sewage with other materials as a manure.	1435	9th June 1863	Henry Martin.
Treatment and preparation of materials for the manufacture of paper. (*Residuum applicable as manure.*)	1652	3rd July 1863	Charles Martin.
Apparatus for separating solid from fluid fecal matters.	2126	28th Aug. 1863	Edouard Amourous.
Improvements in treating excrementitious and sewage matters, and in the means or apparatus employed therein.	2208	8th Sept. 1863	Thomas Henry Baker. George Friend.
Treatment of rags and obtaining valuable chemical products from the animal fibre therein. (*Obtaining manure.*)	2294	18th Sept. 1863	William Lorberg.
Treating natural phosphates of lime for agricultural purposes.	2724	4th Nov. 1863	Guillaume Ville.
Certain improvements in the manufacture of manure - - - - -	2731	4th Nov. 1863	Jean Augustin Barral. Louis Adolphe Cochery.
Construction of syphons for taking off liquid sewerage overflow of rivers and other like purposes.	2849	14th Nov. 1863	George Barker.
Improvements in machinery for amalgamating or intermixing dry, semifluid or aqueous materials, and for agitating solids with liquids, for combining, dissolving or washing the same. (*Phosphating bones, &c.*)	2947	23rd Nov. 1863	Thomas Carr.
Manufacture of superphosphate of lime - -	3152	14th Dec. 1863	John Wright.
Improvements in the manufacture of certain descriptions of artificial manure and in apparatus to be employed therein.	3264	24th Dec. 1863	John Maynes.
MAPS AND GLOBES.			
A new division of time and the application thereof to mathematical and other instruments. (*Applicable to maps and globes.*)	2107	26th Aug. 1863	Santini Fattorini.
Apparatus used when rolling blinds, maps and other articles on rollers. (*Communicated by Silas Safford Putnam and Harriet Luthera Packer.*)	2836	13th Nov. 1863	George Tomlinson Bousfield.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MATCHES, FUSES, PIPE AND CIGAR LIGHTS, SPILLS.			
Improvements in lucifer matches, fusees and other similar lights, and in the boxes or holders for containing the same. (*Communicated by Thomas Jordery.*)	56	7th Jan. 1863	William Squire Bruce.
Means or apparatus for treating splints used in the manufacture of matches and other lights.	59	7th Jan. 1863	George Charles Grimes.
Manufacture of match-boxes - - -	62	7th Jan. 1863	George Dowler.
Improvements in desiccating and in preserving matters from decay. (*Matches.*) (*Communicated by Jean Baptiste Pierre Camille Bergoukhioux.*)	186	21st Jan. 1863	William Clark.
Manufacture of metallic boxes - - - (*For matches.*)	237	27th Jan. 1863	William Rollason the younger.
An improved machine for making spiral lighters or spills from wood or other substance, and which machine will make and colour them when desired at one process or operation.	537	26th Feb. 1863	Charles Ritchie.
Improvements in projectiles for ordnance and in fuses therefor. (*Communicated by Isaac Pettingill Tice.*)	881	7th April 1863	Alfred Vincent Newton.
An improvement or improvements in match-boxes -	1215	14th May 1863	George Dowler.
A certain new manufacture for firing explosive compounds - - - - - - -	1297	23rd May 1863	John Solomon Bickford. George Smith.
Manufacture of matches usually termed vesuvians -	1353	29th May 1863	Robert Barker.
Improvements in lucifer matches, fusees and other similar lights, and in the boxes or holders for containing the same. (*Communicated by Thomas Jordery.*)	1683	7th July 1863	William Squire Bruce.
Machinery for cutting splints for matches and for collecting the same.	1926	4th Aug. 1863	Edmund Pace.
Manufacture of fusees or matches employed to light cigars and pipes.	2089	22nd Aug. 1863	Henry Joseph Simlick.
A new or improved apparatus for lighting and cutting the ends of cigars.	2119	27th Aug. 1863	Charles Richard.
Improvements in cigar lighters and fusee matches, part of said improvements being applicable also to vestas and matches, wax tapers and candles.	2260	15th Sept. 1863	Charles Battcock.
A new attachment to coverings for the head and to other articles of dress, for lighting matches. (*Communicated by Justus Osman Woods.*)	2627	24th Oct. 1863	George Haseltine.
Manufacture of fusees or matches employed to light cigars and pipes.	2811	12th Nov. 1863	Henry Joseph Simlick.
Fuzes and shells for ordnance - - -	3005	1st Dec. 1863	Edward Mounier Boxer.
Improvements in the manufacture of fusees, vesuvians or other cigar or pipe lights, and in means or apparatus employed in the manufacture of cigar or pipe lights, lucifer matches and vestas.	3080	8th Dec. 1863	George Charles Grimes.
Percussion fuses for igniting the charges of explosive projectiles, mines, torpedoes and other charges of gunpowder or other explosive or easily inflammable substances or compounds. (*Communicated by John Jordon Eckel.*)	3250	23rd Dec. 1863	William Clark.
Mode of igniting explosive projectiles - -	3258	24th Dec. 1863	Andrew Noble.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MEASURING AND GAUGING LENGTH, SIZE AND QUANTITY; LOOM AND OTHER MACHINE REGISTERS; APPOINTMENT AND DATE INDICATORS; CHECKS FOR CASH-TAKING.			
Apparatus for winding and measuring lace - -	595	3rd March 1863	John Sibert.
Means or apparatus for registering suitable for advertisers' purposes.	612	4th March 1863	William Hamilton.
Improvements in apparatus for winding, cleaning, measuring, sorting, doubling, throwing and reeling silk, parts of which improvements are also applicable to like machinery for spinning, doubling and twisting cotton, wool and other fibrous materials.	674	12th March 1863	Frederick Buser Kraushaar.
Action of charger or measure for powder flasks, canisters or other vessels.	678	12th March 1863	Edward Henry Lomas.
An apparatus for registering - - - - -	690	14th March 1863	Frederick Rudrum.
A translucid cylindric apparatus for bringing the former weights and measures into those of the present decimal system most easily and precisely, and vice versâ.	826	31st March 1863	Amedée Barthelemi Donat Maurand.
Apparatus for transmitting, equalizing and registering human power - - - - -	997	21st April 1863	William Ryan. William Daniel.
Improvements in apparatus for registering, indicating and verifying the time and distance passed over by vehicles, also applicable to machinery and other similar purposes.	1035	25th April 1863	Louis Alexandre Joseph Bruet.
Certain improvements in apparatus for weighing solid bodies and for measuring fluids, parts of which improvements are also applicable to the opening and closing of "dampers."	1076	29th April 1863	Ellis Rowland.
A new apparatus for indicating appointments or fixed engagements.	1108	2nd May 1863	Henry Myers.
Looms for weaving - - - - -	1152	8th May 1863	John Smalley Grimshaw.
Machinery for plaiting and measuring woven fabrics - - - - - -	1589	24th June 1863	Samuel Knowles. Robert Hayward.
An improved calendar or date denoting apparatus -	1747	13th July 1863	George Henry Barber.
Machinery for winding, measuring and sizing silk - (*Communicated by Emile Duseigneur.*)	1801	17th July 1863	Richard Coenen.
Nicrometer draughting scales - - -	1817	20th July 1863	Josiah Lyman.
Machinery for rolling hoops and tyres - - (*Gauging apparatus.*)	1832	22nd July 1863	Peter Rothwell Jackson.
An improved method of and apparatus for indicating the number of tubs or other measures or quantities of coal or other substance or material drawn from pits or mines.	2021	15th Aug. 1863	George Yates.
An improved apparatus for indicating or registering the speed or distance travelled by all kinds of vehicles, which said apparatus is also applicable to engines, water-wheels and prime motors of any description.	2082	21st Aug. 1863	Jean Baptiste Charles Lange.
Measuring apparatus for looms - - -	2123	28th Aug. 1863	Robert Bell.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MEASURING, &c.—*continued.*			
Improvements in shears for cutting metal threads, wires and rods, applicable also for gauging wires. (*Communicated by Leon Gauches.*)	2323	21st Sept. 1863	Emile Alcan.
Certain improvements in apparatus for weighing solid bodies and for measuring fluids, parts of which improvements are also applicable to the opening and closing of dampers.	2818	12th Nov. 1863	Ellis Rowland.
Machinery for pulverizing and cleaning the soil and scattering seed, guano, bone dust and other substances thereon.	2861	14th Nov. 1863	John Walmsley.
An improved apparatus for checking cash taking at intervals - - - - - -	3064	7th Dec. 1863	John Ford Hallet. Thomas Loynes White.
Looms for weaving - - - - -	3241	22nd Dec. 1863	Archibald Turner.
Apparatus for drawing off and measuring fluids -	3263	24th Dec. 1863	Henry Philip Forrest.
For Measuring Angles, *see* "COMPASSES."			
MEASURING AND REGISTERING PROGRESS OF LOCOMOTIVES, CARRIAGES AND SHIPS; COUNTING AND MILEAGE APPARATUS OR TURNSTILES FOR CABS, &c.			
An improved log - - - - - -	187	21st Jan. 1863	Ernest Bazin.
An improved turnstile especially applicable to omnibuses and other vehicles, to show or indicate the number of passengers that have been carried.	280	30th Jan. 1863	James Cocker.
Apparatus for recording the revolutions of the propelling shaft of a steam ship or vessel.	596	3rd March 1863	George Lamb.
An improved mileage apparatus for measuring and registering the distances public vehicles or private carriages travel.	836	1st April 1863	Isaac Rowland.
Improvements in apparatus for registering, indicating and verifying the time and distance passed over by vehicles, also applicable to machinery and other similar purposes.	1035	25th April 1863	Louis Alexandre Joseph Bruet.
Improvements in indicating the locality of fire, applicable also to denoting the position of ships. (*See* "COPYING.")	1055	27th April 1863	William Henry James.
An indicator for railway trains - - -	1407	8th June 1863	William Armitage Brown.
An improved apparatus for regulating the speed of trains on railways, and in assisting the locomotive engine and train in ascending and descending inclined planes. (*Communicated by Carl Schoubersky.*)	1846	23rd July 1863	Moritz Meisel.
An improved apparatus for indicating or registering the speed or distance travelled by all kinds of vehicles, which said apparatus is also applicable to engines, water-wheels and prime motors of any description.	2082	21st Aug. 1863	Jean Baptiste Charles Lange.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MEASURING, &c.—*continued.*			
Apparatus applicable to omnibuses in order to indicate the number of persons entering such vehicles and the distances travelled by the passengers.	2514	13th Oct. 1863	Alexander Crellin.
Ships' logs or apparatus for ascertaining the speed of ships.	2599	22nd Oct. 1863	Frederick Bullock.
Tell-tales or indicators for cabs and such like public vehicles.	2989	27th Nov. 1863	Peter Gaskell.
MEDICAL TREATMENT OF ANIMALS; SHEEP WASH.			
Apparatus for applying water or other fluid to the legs and other parts of horses and other animals.	176	20th Jan. 1863	Samuel Blackwell.
An improved preparation for the cure of scab, foot rot and other diseases of sheep and cattle. (*Communicated by Patrick Hayes.*)	716	17th March 1863	William Edward Newton.
MEDICINES AND CURATIVE APPARATUS; MEDICAL BATHS; INHALING AND RESPIRATORY APPARATUS.			
Improvements in the method of and apparatus for preparing materials for the manufacture of paper and similar purposes, part of the invention being also applicable to other operations in which materials are subjected to the action of hot agents. (*Making extracts of medicinal plants, &c.*)	1	1st Jan. 1863	Robert Hanham Collyer, M.D., F.C.S.
Apparatus for preventing sea sickness - - (*See* "FURNITURE.")	152	17th Jan. 1863	Isaac Ashe.
Manufacture of sulphate of soda for conversion into soda and other uses. (*Glauber salts.*) (*Communicated by Germain Adolphe Thibierge.*)	162	19th Jan. 1863	Richard Archibald Brooman.
Apparatus for applying water or other fluid to the legs and other parts of horses and other animals. (*Applicable to persons.*)	176	20th Jan. 1863	Samuel Blackwell.
A new medicinal preparation for internal and external application.	343	7th Feb. 1863	Jean Sirou.
An improved respirator - - - - -	360	9th Feb. 1863	William Brown Rooff.
Improvements in embalming and preserving from decay human bodies and bodies of other animals, also pickling, curing and flavoring animal bodies. (*For medical purposes.*)	412	14th Feb. 1863	John Morgan, F.R.C.S.I.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MEDICINES, &c.—*continued.*			
Voltaic belts and bandages - - - (*Communicated by Florent Babin.*)	662	11th March 1863	Richard Archibald Brooman.
Machinery for shaping metal and plastic substances (*Pills.*)	819	30th March 1863	Hesketh Hughes.
Treating the waste liquors from bleaching powder stills in order to obtain hydrochloric acid and other products therefrom. (*Epsom salts.*)	967	17th April 1863	Robert Calvert Clapham.
Manufacture of sulphate of soda - - -	1012	23rd April 1863	Thomas Richardson. James Cochran Stevenson.
Moulding or shaping lozenge paste or other plastic materials.	1151	8th May 1863	Henry Schooling.
An improved inhaling apparatus - - -	1184	11th May 1863	Joseph Severin Guirette.
Preparation of castor and other oils for medicinal use.	1422	8th June 1863	Robert Charles Furley.
A new compound extract to be employed as a means for the cure of deafness. (*See* "SURGERY.")	1464	12th June 1863	William Sims.
Manufacture of paper applicable for hemorrhoidal complaints.	1587	23rd June 1863	Franz Feichtinger.
An improved composition applicable to corn plasters	1694	8th July 1863	Frederick Ely.
Apparatus for preventing sea sickness - - (*Communicated by Henry Giffard.*)	1953	7th Aug. 1863	John Henry Johnson.
Improvements in the means of and apparatus for electro-plating, said apparatus being also applicable to medical purposes.	2088	22nd Aug. 1863	Siegmund Moore.
An improved fabric for the production of permanent electricity, applicable for wearing-apparel. (*For medical purposes.*) (*Communicated by Théodore Courant.*)	2370	26th Sept. 1863	William Clark.
Vapor bath apparatus - - - - -	2473	9th Oct. 1863	Louis Lefebvre.
Manufacture of stockings and drawers - - (*To protect against rheumatism.*)	2536	16th Oct. 1863	Samuel Jay.
Machinery for raising and forcing fluids, parts of which improvements are also applicable to steam-engines, blast engines, exhausters and other machines. (*Syringes.*)	2707	31st Oct. 1863	Stephen Holman.
An improved inhaling apparatus - - -	2757	6th Nov. 1863	Joseph Severin Guirette.
Improvements in machinery for amalgamating or intermixing dry, semi-fluid or aqueous materials, and for agitating solids with liquids, for combining, dissolving or washing the same. (*Mixing chemicals and drugs.*)	2947	23rd Nov. 1863	Thomas Carr.
Improvements in obtaining purified or refined oils, and in obtaining oil cakes from cotton seed and other vegetable substances, also in refining or purifying cod liver oil - - - -	3114	10th Dec. 1863	John Anthony Pols. Peter Owen Bernard.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALLIC SALTS AND OXIDES; PLUMBAGO.			
Manufacture of chlorine and bleaching powder, carbonate of soda and soda ash, and sulphate of iron. (*Communicated by Thomas Macfarlane.*)	126	14th Jan. 1863	William Johnson.
Manufacture of potash alum and other salts of potash. (*Chloride of potassium.*)	543	26th Feb. 1863	Peter Spence.
Furnaces and apparatus for manufacturing oxide of zinc or zinc white. (*Communicated by Heinrich Felsch.*)	546	26th Feb. 1863	James Humby.
Manufacture of sulphuric acid and sulphate of iron	863	4th April 1863	Peter Spence.
Treating the waste liquors from bleaching powder stills in order to obtain hydrochloric acid and other products therefrom. (*Oxide of manganese.*)	967	17th April 1863	Robert Calvert Clapham.
A new lubricating material or compound - - (*Plumbago and French chalk.*)	1217	14th May 1863	Frederick Keate Erlam.
Improvements in decorticating grain and seeds, and in the application of the products obtained by and materials used in decorticating. (*Applied in making sulphates of iron and zinc.*) (*Communicated by Jules Lemoine and Louis Joseph Maximilien Chollet.*)	1542	19th June 1863	Michael Henry.
Improvements in the construction and arrangement of galvanic bateries, and in the utilization of products resulting therefrom. (*Obtaining carbonate of zinc.*)	1732	10th July 1863	Ludwig Stille.
New employment of magnesia and its combinations in manufactures. (*Chloride of potassium.*)	1776	15th July 1863	Doctor Christian Gustav Clemm.
Improvements in the treatment and utilization of certain of the waste products from the manufacture of alkali and bleaching powder, and also from certain smelting operations. (*Obtaining metallic oxydes.*)	1860	25th July 1863	Charles Crockford.
Apparatus for evaporating and distilling - - (*Sulphates of iron, zinc, &c.*)	2106	26th Aug. 1863	Jacques Louis Kessler.
Means of utilizing refuse azoted matters of commerce for the manufacture of various chemical products. (*Sulphuret of iron.*) (*Communicated by Amédée Gélis and Lucien Dusart.*)	2222	9th Sept. 1863	William Clark.
Production of sulpho-cyanide of ammonium and other sulpho-cyanides.	2364	25th Sept. 1863	Peter Spence.
Manufacture of zinc white - - - (*Communicated by Alphonse Pallu.*)	2721	3rd Nov. 1863	Michael Henry.
Improvements in the process and manner of making gas for illuminating, heating and other purposes, a part of which may also be applied to the production of metallic oxydes. (*Communicated by William Henry Gwynne.*)	3029	2nd Dec. 1863	Henry Holdrege.
Improvements in the treatment and purification of plumbago for the manufacture of crucibles and other fireproof articles, and in apparatus employed therein.	3107	9th Dec. 1863	Thomas Vaughan Morgan.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS.			
I.—Smelting, Extracting and Reducing Metals; Treating Ores; Refining, Tempering and Annealing Metals; Manufacture of Iron and Steel; Metallic Alloys.			
Improvements in the construction and mode of working apparatus to be employed in pressing, moulding, shaping, embossing, crushing, shearing and cutting metallic and other substances. (*Squeezing puddle balls.*)	37	5th Jan. 1863	Henry Bessemer.
New alloys - - - - - - (*Communicated by Moses Gerrish Farmer.*)	42	6th Jan. 1863	Charles Tiot Judkins.
Furnaces - - - - - - - (*Communicated by Hyppolite Godard Desmarest.*)	84	9th Jan. 1863	Michael Henry.
Improvements in the manufacture and treatment of malleable iron and steel, and in furnaces, machinery and apparatus employed in such manufacture.	114	13th Jan. 1863	Henry Bessemer.
Manufacture of chlorine and bleaching powder, carbonate of soda and soda ash, and sulphate of iron. (*Forming furnace hearths.*) (*Communicated by Thomas Macfarlane.*)	126	14th Jan. 1863	William Johnson.
Machinery for crushing and grinding quartz and other substances.	167	20th Jan. 1863	Joseph Mosheimer.
Improved machinery for separating substances of different specific gravities. (*Crushed ores.*)	193	21st Jan. 1863	Henry Holcroft.
Improvements in supplying air, gases, steam or fluids to iron and other furnaces, and to engines and vessels requiring such supply, and in the apparatus employed therein.	291	31st Jan. 1863	Edward Brown Wilson.
Improvements in generating combustible gases and in the apparatus employed therefor. (*For heating puddling furnaces.*)	307	3rd Feb. 1863	William George Valentin. Frederick Levick.
Apparatus to be used in distilling, subliming and drying.	310	4th Feb. 1863	James Mellor.
Manufacture of gun barrels - - - (*Carbonising.*)	320	4th Feb. 1863	Charles Faulkner. David Faulkner. James Fairley. William Charles Stiff.
Manufacture of iron and alloys of iron - -	342	7th Feb. 1863	John Cameron.
An improvement or improvements in the manufacture of iron for making nails.	353	7th Feb. 1863	David Groucutt.
An improved machine for crushing and amalgamating auriferous quartz, and pulverizing and washing ores - - - - - -	355	9th Feb. 1863	Henry George Williams. Rowland Gwynn Price.
Combining plastic substances with metals -	365	10th Feb. 1863	Matthew Cartwright.
Processes or means employed for separating or extracting silver or other metals from lead. (*Communicated by M. Clement Roswag.*)	385	13th Feb. 1863	George Henry Birkbeck.
Apparatus for heating the blast in the manufacture of iron.	485	23rd Feb. 1863	William Henry Gauntlett.
An improvement in melting and smelting furnaces (*Communicated by James Fletcher Stileman and Zabina Ellis.*)	501	24th Feb. 1863	George Davies.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS (*Smelting*)—*continued.*			
An improvement or improvements in the manufacture of an alloy or alloys of titanium and iron.	522	25th Feb. 1863	Edward Brown Wilson.
Improvements in machinery for digging, compressing and moulding peat or turf, and for retorts and kilns for drying peat or turf, and making peat or turf charcoal, through the agency of hydro-caloric or superheated steam, and for collecting the products of distillation whilst charring the peat or turf. (*Preparing peat for smelting ores.*)	528	25th Feb. 1863	Thomas Vincent Lee.
Construction of furnaces - - - - (*Converting furnaces.*)	568	28th Feb. 1863	Stephen Williamson.
An improvement or improvements in the manufacture of steel and in the apparatus employed therein.	625	5th March 1863	Edward Brown Wilson.
An improvement in the manufacture or treatment of pig or cast iron.	646	9th March 1863	Robert Mushet.
Improvements in treating tin ores and in apparatus for treating ores and matters containing arsenic.	679	12th March 1863	James Polkinghorne.
Manufacture of iron and steel - - - (*Communicated by Emile Guillaume Boigues and Paul Rambourg.*)	708	16th March 1863	William Edward Newton.
An improved machine for amalgamating minerals and other metalliferous and metallurgical products or substances.	742	20th March 1863	William Reay, junior.
Improvements in the manufacture of zinc and in the apparatus employed therein.	771	24th March 1863	Samuel Healey.
Manufacture of iron and steel - - -	774	24th March 1863	John Kirkham.
Improvements in the manufacture of zinc and in the apparatus employed therein. (*Communicated by Adrien Muller.*)	783	25th March 1863	John Henry Johnson.
An improvement or improvements in treating steel and iron prepared by the pneumatic process.	788	26th March 1863	Robert Mushet.
Improvements in furnaces or fire-places, and in apparatus to be used in connection therewith. (*For puddling.*) (*Communicated by Louis Herbert.*)	796	26th March 1863	John Henry Johnson.
Improvements in the manufacture of aniline, napthylamine and other analogous bodies, and in apparatus connected therewith, which apparatus is also applicable to obtaining finely divided metallic iron for other purposes -	815	28th March 1863	John Dale. Gustav Bischof, junior.
Improvements in the manufacture of iron and steel and other metals, and in the apparatus employed therein.	843	1st April 1863	Edward Brown Wilson.
Apparatus employed in the fusion, manufacture, production and refining of metals.	853	2nd April 1863	Astley Paston Price.
Certain improvements in machinery or apparatus for crushing, grinding and dressing metallic ores, quartz and other similar substances.	884	8th April 1863	Joseph Mosheimer.
Preventing the escape of fumes and matters from funaces - - - - -	898	9th April 1863	James Radley, junior. Duncan M'Coll.
Improvements in separating ores from their gangues and in apparatus for the same. (*Communicated by Louis Napoléon Langlois.*)	920	11th April 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS (*Smelting*)—*continued.*			
Treating the waste liquors from bleaching powder stills in order to obtain hydrochloric acid and other products therefrom. (*Soluble salts for extracting metals.*)	967	17th April 1863	Robert Calvert Clapham.
Improvements in furnaces which are principally applicable to the smelting of iron - -	972	18th April 1863	Charles William Siemens. Frederick Siemens.
Manufacture of metals - - - - -	1008	23rd April 1863	Joseph Whitley. John Buckingham Pope. John Watson Burton.
Improved method of condensing lead and other metallic fumes and vapours from furnaces.	1053	27th April 1863	Frederick Bennett.
Certain improvements in the method of obtaining iron from its ore, and in the subsequent treatment thereof for converting the product into a metallic state, and in apparatus connected therewith.	1059	28th April 1863	Silvester Ingledew.
Portable apparatus or instruments for rivetting, caulking, chipping and otherwise operating upon and treating metals and other substances. (*Ore stamping.*)	1095	1st May 1863	John M'Farlane Gray.
Apparatus for separating metals from earthy and other matters mixed with them.	1112	4th May 1863	Bevan George Sloper.
Improvements in the manufacture of wrought iron and steel, and in the apparatus to be employed therein. (*Communicated by Adrien Muller.*)	1115	5th May 1863	John Henry Johnson.
Improvements in the purification of gas ordinarily used in illuminating, and in the reduction of ores and smelting of metals by means of such gas so purified - - - -	1143	7th May 1863	George Bower. Alexander Dick.
Arrangement or construction of furnaces to render the combustion of the fuel more complete and to prevent the emission of smoke therefrom.	1147	7th May 1863	Jean Baptiste Pierre Alfred Thierry.
Glass and other furnaces or kilns - - - (*Puddling furnaces.*)	1189	12th May 1863	Thomas Warren.
Improvements in the manufacture of iron and other metals and in the apparatus employed therein, parts of which are applicable for other purposes where high temperatures are employed.	1238	16th May 1863	Edward Brown Wilson.
Improved apparatus or mechanism to be used for facilitating the puddling of iron.	1242	18th May 1863	Henry Bennett.
Manufacture and purification of the metal magnesium.	1278	21st May 1863	Edward Sonstadt.
Apparatus for sorting and washing ores - -	1431	9th June 1863	Charles Nicquet.
Cupolas and blast furnaces - - -	1470	12th June 1863	George Bedson.
Manufacture of iron - - -	1513	17th June 1863	William Henry Dawes.
Manufacture of iron and steel - - -	1602	25th June 1863	Robert Mushet.
Using Apo-elastikon hyphrasma as a new and improved cloth for floors, roofs, walls, tanks and other linings, being impervious to damp and of great strength and durability. (*Substitute for lead.*)	1603	25th June 1863	William Kirrage.
Machinery for puddling iron and steel - -	1612	26th June 1863	John Griffiths.
Manufacture of iron and steel - - - -	1613	26th June 1863	Robert Mushet.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS (*Smelting*)—*continued.*			
Improvements in treating ores and earths containing iron in order to obtain the metal therefrom.	1704	8th July 1863	John Thomas.
Improvements in treating ores and other substances containing iron, in the manufacture of iron, steel and alloys of iron, and of a purifying and deoxidizing agent therefrom, also in the construction of retorts or kilns for treating the said ores and substances.	1728	10th July 1863	William Henderson.
Furnaces for boilers, smelting and other useful purposes.	1760	14th July 1863	James Davison.
Manufacture of sodium - - - -	1763	14th July 1863	Edward Sonstadt.
Improvements in the treatment and utilization of certain of the waste products from the manufacture of alkali and bleaching powder, and also from certain smelting operations.	1860	25th July 1863	Charles Crockford.
An improved method of manufacturing iron and steel with cast iron taken in a subdivided state.	1872	28th July 1863	Alphonse Anthelme Antoine Baron de Rostaing.
Improvements in the construction and protection of ships, vessels and floating batteries, and in the preparation and arrangement of materials for those purposes, some of such improvements being applicable to the construction and protection of land fortifications. (*Converting iron plates into steel.*)	1929	5th Aug. 1863	George Clark.
Improved apparatus for generating heat for smelting and other purposes.	1946	6th Aug. 1863	John Kirkham.
An improved process for hardening cast iron - (*Communicated by Thomas Allin.*)	1980	11th Aug. 1863	Alfred Vincent Newton.
Manufacture of iron - - - -	1981	11th Aug. 1863	Jacob Geoghegan Willans.
An improvement or improvements in the manufacture of cast steel.	1987	12th Aug. 1863	Robert Mushet.
Fans, pumps and machinery for propelling air, fluids or other substances by centrifugal force. (*For blast furnaces.*)	2008	14th Aug. 1863	Christian Schiele.
Blast furnaces - - - -	2012	14th Aug. 1863	Edward Brown Wilson.
A new metallic alloy - - - - (*Communicated by Henri Micolon.*)	2086	22nd Aug. 1863	Richard Archibald Brooman.
Manufacture of iron and steel from the cinders and refuse of puddling and other furnaces, and from certain kinds of ores. (*Communicated by Antoine Leonard Fleury.*)	2122	28th Aug. 1863	George Davies.
Manufacture of steel - - -	2125	28th Aug. 1863	Edward Vickers.
Improvements in machines for crushing hard substances, for washing ores and minerals, and for separating earth and earthy matter from solid substances.	2172	2nd Sept. 1863	Frederick Charles Phillip Hoffman.
A new or improved combined coke oven and hot blast oven or apparatus. (*Blast for smelting furnaces.*)	2277	17th Sept. 1863	James M^c^Ewen.
Improvements in the manufacture of iron and steel, and in apparatus to be employed in such manufacture. (*Communicated by William Gerhardt.*)	2293	18th Sept. 1863	George Davies.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS (*Smelting*)—*continued.*			
Improvements in the manufacture of iron and other metals and in the apparatus employed therein, parts of which are applicable for other purposes where high temperatures are employed, and also for ventilation.	2425	3rd Oct. 1863	Edward Brown Wilson.
Improvements in refining crude pig iron and in furnaces connected therewith.	2477	9th Oct. 1863	George Parry.
An improved method of condensing and purifying the fumes and gases arising from the treatment of metals and metallic ores and substances.	2482	9th Oct. 1863	Richard Martyn.
Improvements in amalgamating and separating gold and silver from quartz and earths containing the same, and in apparatus employed therein. (*Communicated by Henry Wright Adams and William Savage Worthington.*)	2483	9th Oct. 1863	Richard Archibald Brooman.
Improved apparatus for purifying waste gases from blast and other furnaces.	2485	10th Oct. 1863	John Vaughan.
An improvement in vessels or baths for containing heated metals and fluxes employed in the processes of hardening and tempering steel and steel articles.	2497	12th Oct. 1863	William Tarleton Bury.
Means of uniting or joining plates or sheets of metal, which invention is applicable to the construction of boilers, tubes and other useful purposes. (*Furnaces for smelting.*)	2549	17th Oct. 1863	Edward Henry Cradock Monckton.
Improvements in separating ores from their gangues, and in apparatus for the same. (*Communicated by Jean Joseph Bonnard.*)	2558	19th Oct. 1863	William Clark.
Apparatus for condensing metallic and other fumes	2583	21st Oct. 1863	Gilbert Howell.
Preparing ores and earths containing copper for smelting.	2725	4th Nov. 1863	John Thomas.
Fans for forcing and exhausting air or other gases. (*For blowing blast furnaces.*)	2726	4th Nov. 1863.	Edward Hughes.
Treatment and application of steel and homogeneous metal.	2743	5th Nov. 1863	Joseph Whitworth.
Improvements in the manufacture of malleable iron and steel, and in the apparatus employed in such manufacture.	2746	5th Nov. 1863	Henry Bessemer.
Improved process and apparatus for amalgamating the precious metals. (*Communicated by Jean Baptiste Baux and Alexis Guiod.*)	2819	12th Nov. 1863	William Edward Gedge.
Treatment or manufacture of wrought and cast iron and steel. (*Communicated by Marc Antoine Augustin Gaudin.*)	2852	14th Nov. 1863	William Edward Newton.
Mechanism or apparatus for reducing or pulverizing ores and other substances required to be reduced or pulverized.	2864	16th Nov. 1863	Charles Pengilly.
Treatment of certain ores of iron - - -	2903	19th Nov. 1863	John Kirkham.
Improvements in machinery for amalgamating or intermixing dry, semi-fluid or aqueous materials, and for agitating solids with liquids, for combining, dissolving or washing the same.	2947	23rd Nov. 1863	Thomas Carr.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS (*Smelting*)—*continued.*			
Improvements in obtaining and applying heat and in apparatus therefor, being also in part applicable for lighting - - - - - (*For reverberatory furnaces.*)	3057	5th Dec. 1863	William Gorman. John Paton.
Machinery for puddling iron and steel - -	3093	8th Dec. 1863	Thomas Harrison.
Manufacture and strengthening of guns, hydraulic press and other cylinders.	3164	15th Dec. 1863	Ludwig Nobel.
Improvements in the manufacture of iron and steel, and in the machinery, apparatus and furnaces used therein, and for the production and application of gas to be employed in such manufacture, and the application of parts of the said apparatus to the manufacture of glass and alkali.	3213	19th Dec. 1863	William Henry Tooth.
Machinery or apparatus employed in the manufacture of steel and iron.	3233	22nd Dec. 1863	Daniel Adamson.
Lifts or machinery or apparatus for raising and lowering weights. (*Minerals for blast furnaces.*)	3240	22nd Dec. 1863	John Gjers.
Apparatus for forging and tempering bayonet blades, files and other articles. (*Communicated by Hervey Waters.*)	3251	23rd Dec. 1863	George Tomlinson Bousfield.
Kilns for calcining ironstone and limestone -	3273	28th Dec. 1863	John Gjers.
XI.—Casting and Moulding Metals; Moulds and Core-boxes.			
Improvements in the manufacture of cast-iron pipes and the apparatus employed for that purpose. (*Communicated by William Hainsworth.*)	179	21st Jan. 1863	Thomas Wright.
Manufacture of cast-iron pipes, columns or any description of tubing.	465	20th Feb. 1863	William Hainsworth.
Apparatus for moulding - - - -	472	21st Feb. 1863	Robert Thompson.
Core barrels - - - - - - -	745	20th March 1863	John Nield. Thomas Arthur Nield.
An improvement or improvements in moulds to be used for casting steel or homogeneous iron.	818	30th March 1863	Robert Mushet.
Improvements in making moulds for casting and in apparatus connected therewith - -	846	2nd April 1863	John Warren Law. John Inglis.
A new and improved mode of manufacturing type for letter-press printing.	1030	25th April 1863	Samuel Harrison.
Improvements in making moulds for casting and in apparatus therefor.	1164	9th May 1863	James Norie.
Manufacture of bells and of resisting and non-cutting tools. (*Communicated by Henri Micolon.*)	1302	23rd May 1863	Richard Archibald Brooman.
Projectiles for ordnance - - - -	1334	27th May 1863	William Palliser.
Permanent way of railways - - -	1441	10th June 1863	Russel Aitken.
An improved apparatus for shaping plastic materials and hot but not melted metals, by means of pressure, percussion or rolling. (*Communicated by Elbridge Wheeler.*)	1502	16th June 1863	Francis Stanton Williams.
Machinery for making moulds to be employed when casting metal.	1530	18th June 1863	Robert Jobson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS (*Casting*)—*continued.*			
Improvements in the ornamentation of silver, German silver, Britannia metal, electro-plated or other plated goods.	1595	24th June 1863	Thomas Skinner.
Construction of railways and tramways - -	1739	11th July 1863	Hugh Greaves.
Manufacture of hollow cutting tools - - (*Casting.*)	1808	20th July 1863	William Simpson. John Hutton.
Machinery or apparatus for moulding and casting hollow projectiles. (*Communicated by Jean Simon Voruz, senior.*)	1925	4th Aug. 1863	William Edward Newton.
An improved mode of and apparatus for producing stereotype plates. (*Communicated by Stephen Davis Tucker.*)	1934	5th Aug. 1863	Alfred Vincent Newton.
Improvements in pipe castings for gas, water, sanitary and other general purposes, and the introduction of an elastic chemical compound to form expansive joints thereto, for prevention of leakage.	1950	7th Aug. 1863	Frederick George Mulholland.
Machines for the preparation of moulds for casting -	1990	12th Aug. 1863	Richard Canham.
Moulding or shaping metals - - -	2211	8th Sept. 1863	James Deas Jack.
Improvements in apparatus and machinery for the manufacture of metallic tubes and hollow cylinders, part of which improvements may also be applied to the casting of other hollow bodies.	2217	9th Sept. 1863	William Glydon the younger.
Improvements in the manufacture of iron and steel, and in apparatus to be employed in such manufacture. (*Communicated by William Gerhardt.*)	2293	18th Sept. 1863	George Davies.
An improvement in the manufacture of cast-steel tyres. (*Communicated by Jacob Mayer.*)	2317	19th Sept. 1863	Thomas Edward Vickers.
Cast iron pit tubbing - - - - -	2459	7th Oct. 1863	John Gibson.
Improvements in the manufacture of hoops and tires for railway wheels and other purposes, and in the machinery employed therein.	2493	12th Oct. 1863	Peter Rothwell Jackson.
Manufacture of copper rollers used for printing calico or other materials - - -	2561	20th Oct. 1863	William Ingham. Isaac Wood.
An improvement or improvements in the manufacture of moulds for casting studs for chains.	2563	20th Oct. 1863	David Mills.
Improvements in the construction of iron and other ships, vessels and batteries of war, and of cupolas and armour plates applicable thereto, parts of which improvements are also applicable to other useful purposes. (*Casting lead packing.*)	2690	30th Oct. 1863	Barnabas Russ.
Treatment and application of steel and homogeneous metal.	2743	5th Nov. 1863	Joseph Whitworth.
Manufacture of railway bars - - -	2744	5th Nov. 1863	Henry Bessemer.
Casting ingots of steel - - - -	2760	6th Nov. 1863	William Daniel Allen.
Wheels, tires, axles and axle-boxes, and modes of applying them.	2896	19th Nov. 1863	William Bridges Adams.
An invention, firstly, for casting cylinders of steam-engines in the form of a segment of a cylindrical ring or circle, and secondly, for the machine for boring them truly cylindrical and retaining the line of the bore on the curve of a true circle. (*Communicated by Samuel Woodruff and Henry B. Beach.*)	3103	9th Dec. 1863	William Henry Cole.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS (*Casting*)—*continued.*			
Shields or tips for boots and shoes - - (*Communicated by Horace Bearce.*)	3256	23rd Dec. 1863	John Henry Johnson.
XIX.—Forging, Rolling, Hammering, Riveting, Bending, Welding and Shaping Metals; Steam Hammers, Anvils.			
Battery plates - - - - - -	2	1st Jan. 1863	William Henry Brown.
Certain apparatus for raising and planishing metals	9	1st Jan. 1863	William Soutter.
Manufacture of wrought metal piles, columns and shafts.	20	2nd Jan. 1863	Joseph Emerson Dowson.
Manufacture of wire - - - - -	22	2nd Jan. 1863	Alfred Sohier Bolton.
Improvements in machinery used in the manufacture of shovels and spades, and for raising and shaping metals for other purposes.	32	5th Jan. 1863	Henry Yates.
Improvements in the construction and mode of working apparatus to be employed in pressing, moulding, shaping, embossing, crushing, shearing and cutting metallic and other substances. (*Forging bars, axles, ingots, &c.*)	37	5th Jan. 1863	Henry Bessemer.
Machinery for rolling, grinding and cutting files - (*Communicated by William Picket Pierce.*)	119	14th Jan. 1863	George Tomlinson Bousfield.
Steam hammers and other engines driven by steam	216	24th Jan. 1863	William Mellor. William Whaley.
Manufacture of anvils and other metal articles requiring hard surfaces. (*Communicated by Louis Jules Duhesme Alexandre Rey and Ernest Muaux.*)	223	24th Jan. 1863	Richard Archibald Brooman.
Means or apparatus for shaping, rolling or compressing metal.	296	2nd Feb. 1863	William Charles Barnes.
Mode of uniting metallic surfaces - - (*Rivetting.*) (*Communicated by William Brainerd Barnard.*)	313	4th Feb. 1863	George Haseltine.
Construction of iron ships or vessels and of armour applicable thereto.	319	4th Feb. 1863	Barnabus Russ.
Improvements in holster boxes or boxes for screws or pins to work in, and in the manufacture thereof.	340	6th Feb. 1863	Richard Dennis Tivnann.
Machinery for shearing, punching and rivetting metals.	369	11th Feb. 1863	Hugh Donald.
Improvements in the manufacture of lead, tin and other metals or amalgamation of metals of a like fusible nature, into sheets of any required thickness and length, and also coating one or both sides of pipes and sheets of lead and other metal or amalgamation of metals, with tin or other substances, and in the apparatus connected therewith.	388	13th Feb. 1863	Jabez Jones.
Manufacture of armour plates for ships and other structures. (*Communicated by Alexander Holley.*)	481	21st Feb. 1863	John Brown.
Improvements in producing imitation gilding on paper hangings and other surfaces, also in metal leaf and metallic or bronze powder suitable for the purpose.	495	23rd Feb. 1863	John Erwood.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS (*Forging*)—*continued.*			
Construction and arrangement of armour plates for ships.	497	24th Feb. 1863	Daniel Spink.
Manufacture of armour plates or blocks for defensive purposes.	542	26th Feb. 1863	James Yates.
Manufacture of beaters for thrashing machines (*Rolling and grooving.*)	558	27th Feb. 1863	William Gray.
Improvements in metal sheathing for ships and vessels, and in the securing of such sheathing thereto.	589	3rd March 1863	Robert Saunders.
An improved mode of applying and fastening metal sheathing to the bottoms of iron ships or vessels, and to iron for other uses	602	4th March 1863	Charles Mark Palmer. John M'Intyre.
Improvements in manufacturing curvated armour plates and other iron work, and in machinery or apparatus employed therein.	614	4th March 1863	William Littell Tizard.
Improvements in the construction of metal casks, and in the machinery employed in the manufacture thereof. (*Communicated by Samuel Jefferson Seely and Edmund Brown Bulkley.*)	644	6th March 1863	William Edward Newton.
Improved armour plates for vessels, turrets, targets, forts and other structures in which armour plates are or may be used	655	9th March 1863	William John Clapp. Nathaniel Coats.
Machinery for rolling armour plates, bridge plates, boat plates, and other plates and bars of iron	681	13th March 1863	John Harris. Joseph Butler. John Henry Fraser.
An improvement in the manufacture of springs	748	20th March 1863	George Wilson.
Improvements in the manufacture of iron or other metallic rod and wire, and in the machinery or apparatus employed in such manufacture.	777	25th March 1863	Michael Phillipps.
Machinery for shaping metal and plastic substances	819	30th March 1863	Hesketh Hughes.
An improved mode of constructing the armour of vessels of war	829	31st March 1863	Archibald Hamilton Bell. Valentine Græme.
Improvements in the construction of ships or vessels, part of which improvements are also applicable for constructing buildings, and for various other purposes in which rolled iron is employed.	851	2nd April 1863	William Jones.
Machinery for hammering, rolling and shaping metals.	924	13th April 1863	John Ramsbottom.
Machinery or apparatus for bending or straightening metal plates.	993	21st April 1863	Hugh Donald.
Improvements in the manufacture of barrels for fire-arms and other descriptions of tubes, and in apparatus or machinery to be employed for that purpose.	1023	24th April 1863	James Thompson.
Machinery for punching metals (*Steam hammer.*)	1024	24th April 1863	James Thompson.
Improvements in the manufacture of sheet metal and in ingots or plates of metal, and in the machinery or apparatus employed therein.	1063	25th April 1863	Arthur Kinder.
Improvements in welding and rolling metals and in machinery connected therewith. (*Communicated by Michel Helson.*)	1091	30th April 1863	Edward Griffith Brewer.
Portable apparatus or instruments for rivetting, caulking, chipping and otherwise operating upon and treating metals and other substances.	1095	1st May 1863	John M'Farlane Gray.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS (*Forging*)—*continued.*			
Machinery for punching, stamping or forging metals.	1103	2nd May 1863	George Burt.
Improvements in hoops or bands for fastening bales, and in machinery or apparatus for making the same.	1162	9th May 1863	Samuel Wilson.
Treating worn-out railway tyres - - -	1191	12th May 1863	James Edward M'Connell. George Hinton Bovill.
Manufacture of thick plates of wrought iron for armour plates and other purposes - -	1203	13th May 1863	James Edward M'Connell. George Hinton Bovill.
Machinery for rolling, grinding and cutting files and rasps. (*Communicated by William Picket Pierce.*)	1218	14th May 1863	George Tomlinson Bousfield.
Machinery for planishing and rolling sheet metal -	1234	16th May 1863	John Titus Newton.
Machinery for rolling, polishing, straightening and tapering round rods or bars of iron, steel and other metals - - - - - -	1285	22nd May 1863	Joseph Jones Habershon. John Matthew Habershon. Matthew Henry Habershon.
Steam hammers - - - - - -	1292	23rd May 1863	John Sturgeon.
Manufacture of bells and of resisting and non-cutting tools. (*Hammers, anvils, &c.*) (*Communicated by Henri Micolon.*)	1302	23rd May 1863	Richard Archibald Brooman.
Manufacture of ornamental metal cylinders - (*Striking out of a disc.*)	1314	25th May 1863	Thomas Spurrier.
Improvements in the manufacture of the tyres for railway wheels and in the means of securing the tyres to the wheels - - - - -	1326	26th May 1863	Frederick William Kitson. James Kitson the younger.
Ordnance - - - - - -	1360	30th May 1863	Valentine Baker.
Construction of and mode of working hydrostatic presses and hydraulic apparatus. (*For shaping metals.*)	1439	9th June 1863	Henry Bessemer.
An improved pneumatic hammer, useful also for punching and stamping metals.	1457	11th June 1863	William Walton.
Improvements in the mode of securing or fastening the ends of metal bands, and in machinery for preparing the same.	1480	13th June 1863	John Hopkinson.
An improved apparatus for shaping plastic materials and hot but not melted metals, by means of pressure, percussion or rolling. (*Communicated by Elbridge Wheeler.*)	1502	16th June 1863	Francis Stanton Williams.
Machinery for making chains or chain cables and rings.	1575	23rd June 1863	John Murray.
Improvements in preparing and fashioning iron applicable to the manufacture of boot heels, tips and horse shoes, and in part of the machinery or apparatus to be employed therein.	1576	23rd June 1863	Alexander Richmond Stocker.
Certain improvements in iron hurdles and fencing	1626	30th June 1863	Joseph Simpson.
Improvements in the manufacture of pillars, posts, columns, mouldings and buildings when corrugated metal is employed, and in machinery used in corrugating, moulding and shaping metal for such purposes.	1792	16th July 1863	Edwin Maw.
Machinery for rolling hoops and tyres - -	1832	22nd July 1863	Peter Rothwell Jackson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS (*Forging*)—*continued.*			
Improvements in means or apparatus for closing, punching and rivetting hose pipes of leather or other substances, applicable also for punching and rivetting mill bands or driving straps and similar purposes.	1834	22nd July 1863	Charles Senior.
Manufacture of gun barrels - - - (*Communicated by Maurice Mondon.*)	1859	25th July 1863	Frederick Tolhausen.
An improved method of manufacturing iron and steel with cast iron taken in a subdivided state.	1872	28th July 1863	Alphonse Anthelme Antoine Baron de Rostaing.
Improvements in shaping boiler and other plates, and in apparatus employed therein. (*Flanging the edges.*)	1904	1st Aug. 1863	George Taylor.
Improvements in the construction and protection of ships, vessels and floating batteries, and in the preparation and arrangement of materials for those purposes, some of such improvements being applicable to the construction and protection of land fortifications.	1929	5th Aug. 1863	George Clark.
Improvements in the method of fastening hoops for packing bales, and in the machinery or apparatus employed therein. (*Flattening the ends of the bands.*)	1967	10th Aug. 1863	John Alexander Fullarton.
Fans, pumps and machinery for propelling air, fluids or other substances by centrifugal force. (*For smiths' forges.*)	2008	14th Aug. 1863	Christian Schiele.
Improvements in the manufacture and fitting or securing of armour plates, blocks or bars, and in the machinery or apparatus employed therein, parts of which improvements are applicable to heavy forgings generally.	2051	18th Aug. 1863	James Yates.
A new metallic alloy - - - - (*For making anvils.*) (*Communicated by Henri Micolon.*)	2086	22nd Aug. 1863	Richard Archibald Brooman.
Hydraulic apparatus - - - (*Stampers used in working metal.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Manufacture of lids or covers for certain articles of hollow ware.	2195	5th Sept. 1863	Charles Henry Adames.
Improvements in apparatus and machinery for the manufacture of metallic tubes and hollow cylinders, part of which improvements may also be applied to the casting of other hollow bodies. (*Rolling.*)	2217	9th Sept. 1863	William Glydon the younger.
Improvements in the manufacture of iron rods, and in machinery to be employed in the said manufacture.	2237	11th Sept. 1863	William Taylor.
Construction and application of apparatus and implements used for the purpose of heating, cooling and evaporating.	2253	14th Sept. 1863	Henry Riviere.
An improvement in T fastenings - - -	2299	18th Sept. 1863	Herbert William Hart.
An improved mode of strengthening tilt hammers -	2311	19th Sept. 1863	Benjamin Davis. William Bowler.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS (*Forging*)—*continued.*			
Improvements in the manufacture of boot and shoe toe pieces or tips, and in the machinery or apparatus employed therein. (*Communicated by the American Shoe Tip Company.*)	2382	28th Sept. 1863	John Henry Johnson.
Machinery for rolling and cutting files and rasps -	2385	29th Sept. 1863	Francis Preston.
Props and supports for coal and other mines -	2398	30th Sept. 1863	George Elliot.
Certain improvements in the manufacture of wrought-iron shackles.	2442	6th Oct. 1863	Edwin Whitehouse.
Manufacture of hames - - - - -	2488	10th Oct. 1863	William Brookes Fairbanks. Joseph Lavender. Frederick Lavender.
Improvements applicable to metallic casks and in machinery for the manufacture of the same.	2498	12th Oct. 1863	Thomas Browning.
Improvements in machinery for rolling, shaping or forging metals, and in apparatus for grinding and polishing the same.	2506	13th Oct. 1863	James Dodge.
Manufacture of rails for railways - - - - (*Communicated by Thomas Shoenberger Blair.*)	2525	15th Oct. 1863	Peter Lesley.
Means of uniting or joining plates or sheets of metal, which invention is applicable to the construction of boilers, tubes and other useful purposes.	2549	17th Oct. 1863	Edward Henry Cradock Monckton.
Machinery for bending plates for iron ships and other like purposes.	2574	20th Oct. 1863	George Heaton Daglish. Thomas Windus.
Improvements in the manufacture of metallic foils and in the apparatus to be employed therein -	2603	22nd Oct. 1863	Arthur Kinder. John Inglis.
Improvements in the manufacture of metallic capsules for bottles and similar vessels, and in the apparatus or means for applying or fixing such capsules thereon.	2623	24th Oct. 1863	William Betts.
An improved machine for punching, shearing and rivetting metals.	2653	27th Oct. 1863	William Livingstone.
Machinery for punching, cutting and pressing metals and other materials.	2657	27th Oct. 1863	Edward Richard Hollands.
Improvements in the construction of iron and other ships, vessels and batteries of war, and of cupolas and armour plates applicable thereto, parts of which improvements are also applicable to other useful purposes.	2690	30th Oct. 1863	Barnabas Russ.
Steam hammers - - - - - -	2715	3rd Nov. 1863	David Davy, junior.
Fans for forcing and exhausting air or other gases - (*For blowing forges.*)	2726	4th Nov. 1863	Edward Hughes.
Portable hydraulic shearing and rivetting machines	2728	4th Nov. 1863	Joseph Tangye.
Method of and machinery for forming metal plates bars and rods taper - - - - -	2770	7th Nov. 1863	John Dyson. Joseph Dyson. George Walter Dyson.
An improved machine for bending metallic pipes or spouts. (*Communicated by Elijah Valentine and Moses Thompson Ridout.*)	2779	7th Nov. 1863	George Haseltine.
Improvements in machinery to be used in the manufacture of heel tips and toe plates for boots and shoes.	2789	10th Nov. 1863	George Yates.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS (*Forging*)—*continued.*			
Construction of armour for ships of war and land batteries.	2848	14th Nov. 1863	Thomas Symes Prideaux.
Improved wrought iron sheeting piles - -	2909	19th Nov. 1863	Robert Gooch.
Presses - - - - - - - (*For pressing metals.*)	2946	23rd Nov. 1863	Edward Brown Wilson. John Imray.
Machinery for shaping the edges of boiler and other plates - - - - -	3001	30th Nov. 1863	John Fernie. George Taylor.
Certain improvements in the method of manufacturing spindles and "skewers" to be employed in spinning fibrous substances, and in apparatus connected therewith.	3084	8th Dec. 1863	Joseph Wray.
Improvements in presses for bending metal plates into the various forms required in naval architecture and for other purposes - - (*Communicated by John Cochrane.*)	3110	10th Dec. 1863	William Galloway. John Galloway.
Forge hammers - - - - -	3189	18th Dec. 1863	Joseph Astbury.
Construction of shot proof iron or steel walls suitable for the sides of war ships, floating batteries or forts.	3202	19th Dec. 1863	Robert Legg.
Construction of machines for cutting and bending wire and similar substances for copper smiths, tin plate, iron and zinc sheet workers - -	3214	21st Dec. 1863	Isaac Coombs. John Tomlinson Pendlebury.
Improvements in the manufacture of welded iron chain and welded steel chain, and in tools to be employed in the said manufacture.	3217	21st Dec. 1863	Edward Tangye.
Apparatus for forging and tempering bayonet blades, files and other articles. (*Communicated by Hervey Waters.*)	3251	23rd Dec. 1863	George Tomlinson Bousfield.
Shields or tips for boots and shoes - - - (*Communicated by Horace Bearce.*)	3256	23rd Dec. 1863	John Henry Johnson.
See also "NAILS."			
IV.—Cutting, Planing, Punching, Boring and Riffing Metals.			
Improvements in the construction and mode of working apparatus to be employed in pressing, moulding, shaping, embossing, crushing, shearing and cutting metallic and other substances. (*And punching.*)	37	5th Jan. 1863	Henry Bessemer.
Apparatus for holding castings and other pieces whilst being planed or shaped.	122	14th Jan. 1863	John Lawson.
Apparatus for cutting metallic tubes or pipes, or tubes or pipes composed of other indurate substances. (*Communicated by George Henry Sanborn.*)	130	15th Jan. 1863	Thomas Critchley Barraclough.
Machinery for punching and cutting metals - (*Communicated by Nicolas De Telescheff.*)	220	24th Jan. 1863	Marc Antoine François Mennons.
Shaping machines for curvilinear surfaces -	265	29th Jan. 1863	James Mackenzie.
An improved boring bench for gun barrels - (*Communicated by Charles Berger.*)	332	6th Feb. 1863	Alexis Heintzmann. Theodore Anthony Rochussen.
Machinery for shearing, punching and rivetting metals.	369	11th Feb. 1863	Hugh Donald.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS (*Cutting*)—*continued.*			
Apparatus for drilling wood, stone, iron or other materials. (*Communicated by Joseph Julien Chenal.*)	370	11th Feb. 1863	Edward Thomas Hughes.
Improvements in ordnance and artillery, and means of operating and mounting the same, and in projectiles and instruments therefor.	484	21st Feb. 1863	Norman Wiard.
Portable hydraulic punching machines - -	694	14th March 1863	Joseph Tangye.
Machinery for punching metals - - -	1024	24th April 1863	James Thompson.
Improved apparatus for fixing drills, which invention is also applicable for fixing apparatus for raising, supporting and suspending weights and for other analogous purposes.	1029	25th April 1863	Leopold De Breánski.
Improvements in the manufacture of and in the machinery and appliances for holding, drilling, turning, tapping, fitting and shaping certain parts of steam, water, gas and lamp fittings.	1041	25th April 1863	John Thomas Stroud.
Improvements in threshing machines, part of which improvements are also applicable for hulling, decorticating, cleaning and polishing grains and seeds. (*Fluting one of the cylinders.*) (*Communicated by Aristide Barbier and Nicolas Edouard Daubrée.*)	1042	25th April 1863	William Edward Newton.
Machinery for punching, stamping or forging metals.	1103	2nd May 1863	George Burt.
Machinery for cutting the teeth of bevelled wheels	1172	9th May 1863	James Burrell.
A new method of rifling guns and of forming projectiles to correspond therewith.	1286	22nd May 1863	Theophilus Alexander Blakely.
Construction of and mode of working hydrostatic presses and hydraulic apparatus. (*For shearing and cutting metals.*)	1439	9th June 1863	Henry Bessemer.
An improved pneumatic hammer, useful also for punching and stamping metals.	1457	11th June 1863	William Walton.
Machinery for manufacturing or preparing iron and other metal plates for shipbuilding and other purposes. (*Drilling, shearing and planing.*)	1604	25th June 1863	Henry Griffith Craig.
Construction of guns and projectiles, and of carriages, platforms and shields for working and protecting guns. (*Rifling.*)	1615	27th June 1863	George Clark.
Improvements in fire-arms and in artillery and projectiles for the same.	1894	31st July 1863	John Coope Haddan.
Improvements in the construction and protection of ships, vessels and floating batteries, and in the preparation and arrangement of materials for those purposes, some of such improvements being applicable to the construction and protection of land fortifications. (*Perforation of armour plates.*)	1929	5th Aug. 1863	George Clark.
An improved mode of and apparatus for producing stereotype plates. (*Bevelling the edges.*) (*Communicated by Stephen Davis Tucker.*)	1934	5th Aug. 1863	Alfred Vincent Newton.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS (*Cutting*)—*continued.*			
Improvements in the method of fastening hoops for packing bales, and in the machinery or apparatus employed therein. (*Punching the apertures.*)	1967	10th Aug. 1863	John Alexander Fullarton.
Machinery for punching and for marking plates in which holes are to be punched.	2014	14th Aug. 1863	Matthew Hodgson Lishman.
Machinery for planing curved, curvilinear, irregular and other forms in iron, steel and other metals.	2077	21st Aug. 1863	Robert Thompson.
Improvements in shaping and punching metallic articles, and in the machinery or apparatus to be employed therein. (*Communicated by Levi Dodge.*)	2113	26th Aug. 1863	David Blake.
Improvements in shears for cutting metal and other substances.	2140	29th Aug. 1863	Frederick Charles Phillip Hoffmann.
Certain improvements in means to be employed for securing the ends of bands in packing "bale goods," and in machinery for manufacturing rivets to be employed for the purpose, and also in apparatus for forming apertures in the aforesaid bands or hoops.	2148	31st Aug. 1863	George Bebbington. Jonathan Robert Hampson.
Machinery for planing or cutting off the sides of armour plates.	2264	16th Sept. 1863	Joseph Fox.
Improvements in shears for cutting metal threads, wires and rods, applicable also for gauging wires. (*Communicated by Leon Gauchez.*)	2323	21st Sept. 1863	Emile Alcan.
Improvements applicable to metallic casks and in machinery for the manufacture of the same.	2498	12th Oct. 1863	Thomas Browning.
Improvements in shears for cutting metals and other substances. (*Communicated by Hugues François Aubert.*)	2501	12th Oct. 1863	William Edward Gedge.
Improvements in the manufacture of pecks, hoes, adzes and other edge tools, and in tools to be used in the said manufacture.	2564	20th Oct. 1863	Joseph Vaughan.
Machinery or apparatus for punching, shearing and burnishing - - - - - -	2595	22nd Oct. 1863	John Craven. Samson Fox.
An improved machine for punching, shearing and rivetting metals.	2653	27th Oct. 1863	William Livingstone.
Machinery for punching, cutting and pressing metals and other materials.	2657	27th Oct. 1863	Edward Richard Hollands.
Portable hydraulic shearing and rivetting machines	2728	4th Nov. 1863	Joseph Tangye.
Machinery for cutting and planing iron and other metals, particularly applicable to machinery for cutting and planing armour plates - -	2735	5th Nov. 1863	Greenwood Craven. William Craven. John Craven.
Construction and manufacture of ordnance, parts of which are applicable to small arms.	2876	17th Nov. 1863	Perceval Moses Parsons.
Improvements in the manufacture of barrels for fire-arms and in machinery to be used in the said manufacture.	2887	18th Nov. 1863	Joseph Rock Cooper.
Improvements in "drifts" or tools used for enlarging holes and in apparatus for making the same.	2897	19th Nov. 1863	John Eglin.
Improvements in the construction of dry gas-meters and in the means or apparatus employed therein. (*Cutting diaphragm disc rings.*)	2912	20th Nov. 1863	George Rait. John Winsborrow.
Presses for cutting, perforating and shaping metals	2964	25th Nov. 1863	Thomas Wilson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS (*Cutting*)—*continued.*			
Guns and gun projectiles	2999	30th Nov. 1863	James Chalmers.
An invention, firstly, for casting steam cylinders of steam-engines in the form of a segment of a cylindrical ring or circle, and secondly, for the machine for boring them truly cylindrical and retaining the line of the bore on the curve of a true circle. (*Communicated by Samuel Woodruffe and Henry B. Beach.*)	3103	9th Dec. 1863	William Henry Cole.
Portable hydraulic punching apparatus	3176	16th Dec. 1863	Edward Richard Hollands.
Ordnance fire-arms and projectiles (*Rifling.*)	3194	18th Dec. 1863	Percival Moses Parsons.
Construction of machines for cutting and bending wire and similar substances for copper smiths, tin plate, iron and zinc sheet workers	3214	21st Dec. 1863	Isaac Coombs. John Tomlinson Pendlebury.
V.—Plating and Coating Metallic Surfaces with Metal; Finishing and Ornamenting Metallic Surfaces.			
Certain apparatus for raising and planishing metals	9	1st Jan. 1863	William Soutter.
Improvements in the manufacture of coated metallic sheets or plates and pieces, and in apparatus to be used therein.	123	14th Jan. 1863	Edmund Morewood.
Improvements in covering wire and other iron articles for the purpose of protecting them from oxidation, and in the mode or method employed therein.	163	19th Jan. 1863	William Henry Harrison.
Coloring, bronzing and preserving iron and steel (*Communicated by Claude Joseph Thirault.*)	171	20th Jan. 1863	Henri Adrien Bonneville.
Manufacture of metallic vessels or receptacles for containing liquids or substances.	180	21st Jan. 1863	Frederic Augustus Busch.
Means or apparatus for soldering together parts of vessels formed of tin or tinned plate.	295	2nd Feb. 1863	Alexander Forbes.
Improvements in the manufacture of lead, tin and other metals or amalgamation of metals of a like fusible nature, into sheets of any required thickness and length, and also coating one or both side of pipes and sheets of lead and other metal or amalgamation of metals, with tin or other substances, and in the apparatus connected therewith.	388	13th Feb. 1863	Jabez Jones.
Improvements in lamps and burners, and in apparatus employed for milling or ornamenting parts of lamps, which apparatus may also be applied to other similar uses.	491	23rd Feb. 1863	Ralph Martindale.
Improvements in the manufacture of tin and terne plates and in the apparatus employed therein.	534	25th Feb. 1863	George Tomkins.
Burglar-proof safes and strong-room doors and frames	594	3rd March 1863	George Price. William Dawes.
Construction of steam-boilers	736	19th March 1863	Henry Wilde.
Apparatus employed in the manufacture of tin and terne plates	738	19th March 1863	John Saunders. Joseph Piper.
Improvements in coating metals and in machinery and apparatus employed in coating metals.	802	27th March 1863	William Millington Morgan.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS (*Plating*)—*continued.*			
An improved process for coating iron (*Communicated by James Mitchell.*)	841	1st April 1863	William Mitchell.
Improvements in coating or covering lead and alloys of lead with tin or alloys of tin, and in the apparatus employed therein.	891	8th April 1863	Arthur Kinder.
Improvements in treating and preparing iron, copper and other wires for telegraphic and other uses, for the purpose of preserving them from corrosion or decay.	963	17th April 1863	Richard Knight.
A mode of lining lead pipe with tin or its alloys	1025	24th April 1863	William Anthony Shaw.
Manufacture of spoons and forks	1048	27th April 1863	Jean Joseph Robert.
Coating wrought or other iron to protect it from corrosion or oxydation. (*Communicated by George Washington Holley.*)	1156	8th May 1863	William Clark.
Machinery for planishing and rolling sheet metal	1234	16th May 1863	John Titus Newton.
Machinery for rolling, polishing, straightening and tapering round rods or bars of iron, steel and other metals	1285	22nd May 1863	Joseph Jones Habershon. John Matthew Habershon. Matthew Henry Habershon.
Improvements in the manufacture of certain descriptions of iron tubing, and in the means of producing and applying an ornamental case to the same, which said means are also applicable to the production of ornaments in metal for other purposes	1300	23rd May 1863	Ferdinand Potts. John Key.
Cooking and culinary utensils	1453	11th June 1863	Edward Deane.
Manufacture of leaden pipes (*Lining with tin.*) (*Communicated by Augustin Henri Hamon.*)	1541	19th June 1863	William Edward Newton.
An improved method or process for obtaining patterns and designs for the arts and manufactures. (*Ornamenting metals.*) (*Communicated by Thomas James Hussey.*)	1566	22nd June 1863	Francis Boult.
Certain improvements in the mode or modes of preparing plates, bars or other objects of iron for being coated with metals or alloys.	1580	23rd June 1863	Thomas Fulham Parsons.
Improvements in the ornamentation of silver, German silver, Britannia metal, electro-plated or other plated goods. (*Embedding jewels.*)	1595	24th June 1863	Thomas Skinner.
Improvements in coating or covering metal sheets with metals or alloys, and in the apparatus employed therein. (*Communicated by Xavier Florentin Girard.*)	1639	1st July 1863	John Henry Johnson.
Certain compositions for protecting metals and metallic articles from oxidation, and for coating slate, bricks, pottery and ceramic ware. (*Communicated by Camille Baroness de Lavenant.*)	1646	2nd July 1863	Richard Archibald Brooman.
Pounded glass powder used for cleaning metals and also for tooth powder.	1795	17th July 1863	Jean Darrieux.
Coating metals	1958	7th Aug. 1863	Edmund Morewood.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METALS (*Plating*)—*continued.*			
Improvements in lubricating and in arrangements and mechanism for lubricating the bearings, journals or steps of spindles, shafts, axles and other mechanism. (*Tinning the receptacles containing water.*)	2043	17th Aug. 1863	James Stead Crosland.
Improvements in the means of and apparatus for electro-plating, said apparatus being also applicable to medical purposes.	2088	22nd Aug. 1863	Siegmund Moore.
An improvement in steam-engines - - (*Lining cylinders with thin metal.*) (*Communicated by Henri Waterman.*)	2226	9th Sept. 1863	Alfred Vincent Newton.
Utilizing the waste flux from galvanizing works -	2356	24th Sept. 1863	James Webster.
An improvement in vessels or baths for containing heated metals and fluxes employed in the processes of hardening and tempering steel and steel articles. (*Providing a metallic lining.*)	2497	12th Oct. 1863	William Tarleton Bury.
Machinery or apparatus for punching, shearing and burnishing.	2595	22nd Oct. 1863	John Craven. Samson Fox.
Improvements in the manufacture of metal drums and cans for holding oils and other fluid matters, and in furnaces used in such manufacture. (*Brazing and soldering joints.*)	2911	19th Nov. 1863	William Benjamin Hodson.
Lawn mowing and grass cutting machines - - (*Galvanising.*) (*Partly communicated by Henry Fisher.*)	3092	8th Dec. 1863	James Edward Boyd.
METERS FOR GAS AND FLUIDS.			
Apparatus for measuring the quantity of gas supplied to single burners and increasing its illuminating power.	115	14th Jan. 1863	Joshua Kidd.
Wet gas meters - - - - - -	134	15th Jan. 1863	Robert Ferrier.
Improvements in obtaining and applying motive-power, which improvements or parts thereof are applicable for raising, forcing and measuring fluids.	512	24th Feb. 1863	Robert William Thomson.
An improved gas meter - - - - -	565	28th Feb. 1863	John Walter Friend.
Dry gas meters - - - - -	664	11th March 1863	George Alexander Fulton. Jackson Clyde.
Certain improvements in apparatus for weighing solid bodies and for measuring fluids, parts of which improvements are also applicable to the opening and closing of "dampers."	1076	29th April 1863	Ellis Rowland.
Wet gas meters - - - - - -	1592	24th June 1863	Edward Myers. William Richard Williams.
Wet gas meters - - - - -	1645	2nd July 1863	James John Shedlock.
Improvements in apparatus for containing and distributing gas for lighting railway carriages, steam-boats and other moveable vehicles and vessels, railway stations and other places, parts of such apparatus being suitable for governing the supply of gas and air for various purposes.	1978	11th Aug. 1863	John Thomson King.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
METERS, &c.—*continued.*			
Improvements in the construction of gas meters and in apparatus to be employed in connection therewith for regulating the pressure and flow of gas to the same.	2102	26th Aug. 1863	John Walter Friend.
A new division of time and the application thereof to mathematical and other instruments. (*Applicable to meter weights and measures.*)	2107	26th Aug. 1863	Santini Fattorini.
Gas meter indicators - - - - -	2626	24th Oct. 1863	James Thomas.
Fluid meters - - - - - (*Communicated by Friederich Klingenfeld.*)	2750	6th Nov. 1863	Charles Denton Abel.
Improvements in machinery or apparatus for measuring and registering fluids, and in obtaining motive-power from the same.	2790	10th Nov. 1863	John Ramsbottom.
Certain improvements in apparatus for weighing solid bodies and for measuring fluids, parts of which improvements are also applicable to the opening and closing of dampers.	2818	12th Nov. 1863	Ellis Rowland.
Gas meters - - - - - -	2878	17th Nov. 1863	William Cowan.
Improvements in the construction of dry gas meters and in the means or apparatus employed therein - - - - -	2912	20th Nov. 1863	George Rait. John Winsborrow.
Dry gas meters - - - - -	3017	1st Dec. 1863	George Glover.
Apparatus for drawing off and measuring fluids -	3263	24th Dec. 1863	Henry Philip Forrest.
MINING; BORING AND BLASTING ROCK; RAISING COALS, &c. FROM MINES; DRAINING, LIGHTING AND VENTILATING MINES.			
An improved method of firing or discharging cannon and other fire-arms, a part of which invention is applicable generally to the firing of charges of powder. (*Communicated by George Washington Beardslee and Frederick Edwards Beardslee.*)	30	3rd Jan. 1863	William Edward Newton.
Improved means or apparatus for preventing overwinding at collieries and to provide extra breakage power to steam-engines.	71	9th Jan. 1863	John Punshon.
Apparatus for saving life and property from fire and other danger in buildings and mines.	113	13th Jan. 1863	John Boyle Rock.
Improvements in obtaining reciprocating motion in steam-engines, and for communicating the same to any ordinary pumps for whatever purpose they may be employed. (*Draining mines.*)	166	20th Jan. 1863	Alfred Paul.
Improved hydraulic machinery for raising water in mines, wells and other places - - -	169	20th Jan. 1863	William Mawson. James Whitehead.
Syphons applied to draining, irrigation and other purposes, whereby they self-suspend and resume action according to requirements. (*Communicated by François Triballat.*)	221	24th Jan. 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MINING, &c.—*continued.*			
Improvements in supplying air, gases, steam or fluids to iron and other furnaces, and to engines and vessels requiring such supply, and in the apparatus employed therein. (*Ventilating mines.*)	291	31st Jan. 1863	Edward Brown Wilson.
Apparatus for cleaving and excavating pit coal and rock or earth.	560	27th Feb. 1863	Victor Désire Delahaye.
Locomotive boring and winding engines - -	668	11th March 1863	Andrew Barclay.
An improved composition for the coating and preservation of canvas and other materials to make them waterproof and non-inflammable. (*For ventilation of mines.*)	735	19th March 1863	Ellis Lever.
Improved means for ventilating mines - -	753	21st March 1863	Isaac Mark Evans. William Thomas Griffiths.
Improved machinery for boring rocks and other hard substances.	903	9th April 1863	George Low.
Manufacture of gunpowder - - - (*For blasting.*) (*Communicated by Samuel Ricker.*)	949	15th April 1863	William Spence.
Apparatus used when getting coal and other minerals.	1072	28th April 1863	George Edmond Donisthorpe.
Portable apparatus or instruments for rivetting, caulking, chipping and otherwise operating upon and treating metals and other substances. (*Mining and quarrying.*)	1095	1st May 1863	John M^cFarlane Gray.
Miners' lamps - - - - -	1140	7th May 1863	Peter Bourne.
An improved machine or apparatus for getting coal or other minerals - - - - -	1319	25th May 1863	John Watson Burton. Samuel Gibson Rhodes. Samuel Oxley Seanor. William Scruton.
Improvements in apparatus for boring, mining and excavating or cutting, in motive-power engines, and in pressing gauges.	1322	26th May 1863	James Munro. Robert Scott.
Machinery and apparatus for working coal and other mines.	1420	8th June 1863	James Grafton Jones. Robert Ridley.
Miners' lamps - - - - -	1444	10th June 1863	Joseph Brooke.
An improved guard or fence for coal, iron, stone or other pits, warehouse or other lifts, sack holes, or other places requiring a guard or fence.	1745	13th July 1863	Joseph Barton.
Boring apparatuses - - - -	1857	25th July 1863	Paul Etienne Gay.
Improvements in machinery and apparatus for working coal and other mines, and in apparatus for loading waggons or other vehicles -	1888	30th July 1863	William Firth. Samuel Firth.
Manufacture of cartridges for blasting and projectile purposes.	1971	10th Aug. 1863	Richard John Cunnack.
Fans, pumps and machinery for propelling air, fluids or other substances by centrifugal force. (*Conveying water from mines.*)	2008	14th Aug. 1863	Christian Schiele.
An improved method of and apparatus for indicating the number of tubs or other measures or quantities of coal or other substance or material drawn from pits or mines.	2021	15th Aug. 1863	George Yates.
Improvements in chimney tops, which improvements are also applicable to coverings for ventilating shafts or flues for mines and other places.	2049	18th Aug. 1863	Thomas Dobb.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MINING, &c.—*continued.*			
Improved apparatus for extracting coal, ores or other minerals or substances from mines, which apparatus may be also employed for raising and lowering the workmen and their tools or implements. (*Communicated by Melchior Colson.*)	2110	26th Aug. 1863	William Edward Newton.
Improved means of and apparatus for employing vapours, gases and the heat derived from combustible matters. (*For ventilating mining shafts.*)	2241	11th Sept. 1863	Louis Meyer.
Blasting rocks and other materials	2251	12th Sept. 1863	Douglas Symonds Sutherland.
Safety lamps for mines (*Communicated by François Chapuis and Léonce Decombette.*)	2256	14th Sept. 1863	William Edward Gedge.
Apparatus for giving a reciprocating motion to picks and cutting tools used in getting coal and other minerals and stone	2327	21st Sept. 1863	Robert Ridley. James Grafton Jones.
An improved mode of manufacturing gunpowder suitable for war, mining and general purposes. (*Communicated by Edward Schultze.*)	2353	24th Sept. 1863	Ernest Dronke.
Machinery for cutting and boring coal and rocks	2357	24th Sept. 1863	John Sturgeon.
Manufacture of gunpowder and powder for blasting purposes. (*Communicated by Alfred Nobel.*)	2359	24th Sept. 1863	Alfred Vincent Newton.
Props and supports for coal and other mines	2398	30th Sept. 1863	George Elliot.
Apparatus to be used for pumping water out of mines and other places.	2448	7th Oct. 1863	Edward Jones.
Cast-iron pit tubbing	2459	7th Oct. 1863	John Gibson.
Improved apparatus for boring and cleaving stone (*Boring for coals.*)	2531	16th Oct. 1863	James Polglase. Jonathan Cox.
An improved blasting powder (*Communicated by Bernhard August Schäffer and Christian Frederick Budenberg.*)	2555	19th Oct. 1863	Arnold Budenberg.
Sinking, quarrying and excavating in the earth	2600	22nd Oct. 1863	James Mitchell.
Machinery for drilling, boring or excavating rock or other earthy substances.	2624	24th Oct. 1863	Edward Smith Crease.
Improvements in the working and mining of coal, minerals and earthy matters, and in the machinery, apparatus and means to be employed therein	2630	24th Oct. 1863	William Locke. John Warrington. William Elliot Carrett. William Ebenezer Marshall. John Telford.
Machinery for cutting and boring coal, stone or other minerals	2659	27th Oct. 1863	William Firth. Samuel Firth. John Sturgeon.
Apparatus used when getting coal and other minerals.	2671	28th Oct. 1863	George Edmond Donisthorpe.
Fans for forcing and exhausting air or other gases (*Ventilating mines.*)	2726	4th Nov. 1863	Edward Hughes.
An improved machine adapted for performing various mining operations, such as working or cutting coal or other analogous substances in mines, forcing water from mines, and air thereunto	2786	9th Nov. 1863	Ralph Henry Phillipson. John Dees.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MINING, &c.—*continued.*			
Guy cranes and other similar cranes - - - - (*For working stone quarries.*)	2814	12th Nov. 1863	Joseph Booth. John Booth. Jeremiah Booth.
Machinery for cutting and excavating coal and other minerals, applicable also to other mining purposes.	2837	13th Nov. 1863	Thomas Harrison.
An improved explosive compound to be used in the manufacture of cartridges, and an improved mode of manufacturing cartridges therewith - (*Or for mining and blasting.*)	2888	18th Nov. 1863	William Wigfall. Gottlieb Jolly.
Improved apparatus for drilling or boring rock and other earthy substances, for exploring and other purposes.	3000	30th Nov. 1863	Enoch Watkin James.
Machinery for cutting coal and other minerals and stones.	3034	2nd Dec. 1863	Thomas Harrison.
Certain improvements in machinery for cutting and boring coal, stone or other minerals -	3066	7th Dec. 1863	William Firth. Samuel Firth. John Sturgeon.
Improvements in supplying air to lights in mines, and in the apparatus employed for that purpose.	3265	24th Dec. 1863	William Renwick Bowditch.
MIXING, MASHING, STIRRING, AGITATING.			
Improvements in the treatment of petroleum and mineral oils, and in apparatus employed therein. (*Agitator.*)	48	6th Jan. 1863	Edward Vincent Gardner.
Improvements in the treatment of organic fecal and urinous matters for the purpose of deodorizing the same, and in the preparation of a portable manure therefrom, and in the treatment of ashes or other refuse of combustion to be combined therewith, also for improvements in machinery to be employed in the manufacture of the said manure. (*Spiral rotating agitator.*)	132	15th Jan. 1863	John Harrop.
Apparatus for churning milk and mixing liquid compounds.	159	19th Jan. 1863	John Laurie.
Combining plastic substances with metals - -	365	10th Feb. 1863	Matthew Cartwright.
An improvement in brewing - - - - -	428	17th Feb. 1863	William Thomas Dibb.
Mashing machinery used in making fermented liquors.	555	27th Feb. 1863	James Fry.
An improvement or improvements in treating steel and iron prepared by the pneumatic process. (*Mixing.*)	788	26th March 1863	Robert Mushet.
An improved machine for agitating and mixing substances. (*Communicated by James Holmes Harper and James Harper Peabody.*)	1071	28th April 1863	George Davies.
Improvements in apparatus for manufacturing beton and artificial stone, pugging clay and other similar purposes, and in the production of artificial stone, and artistic, ornamental and decorative articles, works and surfaces. (*Communicated by François Coignet.*)	1086	29th April 1863	Michael Henry.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MIXING, &c.—*continued.*			
Machinery for weaving, sizing, dressing and dyeing - - - - - (*Agitating the liquids.*)	1201	13th May 1863	Thomas Parkinson. Francis Taylor.
Certain improvements in machinery or apparatus used in the processes or operations of drying, dressing, brushing, waxing and finishing fabrics (*Fan for mixing air and gas.*)	1210	14th May 1863	Thomas Lawrence.
Improvements in the manufacture of bread and in apparatus used for the same.	1241	18th May 1863	William Watson.
An improved method of mashing - -	1448	11th June 1863	Moritz Hatschek.
An improved oil more especially designed for mixing paints and colors, and new mode of manufacturing the same. (*Communicated by Adolph Millochau.*)	1546	20th June 1863	George Haseltine.
Improved apparatus for straining or for mixing and straining liquid and solid substances.	1590	24th June 1863	Theophilus Redwood.
Improvements in the manufacture or production of food for cattle and all other domestic animals, poultry and game, and in the machinery or apparatus employed therein.	2050	18th Aug. 1863	Alexander Cruickshank.
Mashing machinery used in making fermented liquors.	2112	26th Aug. 1863	James Fry.
Mashing apparatus - - - -	2336	22nd Sept. 1863	Charles Maitland.
Improved machinery or apparatus for stirring or mixing various ingredients or materials to a pasty consistence, said machinery being especially adapted to the manufacture of bread and other articles of food. (*Communicated by Charles Constant Simonet de Changy.*)	2350	24th Sept. 1863	Adolphe Ernest Ragon.
Means of uniting or joining plates or sheets of metal, which invention is applicable to the construction of boilers, tubes and other useful purposes. (*Commixing air with gases.*)	2549	17th Oct. 1863	Edward Henry Cradock Monckton.
Machinery or apparatus for opening, cleaning and mixing cotton or other fibrous materials -	2559	20th Oct. 1863	James Taylor. James Lees. John Lees.
Improvements in evaporating, cooling and melting, and in apparatus employed therein - - (*Agitators.*)	2575	20th Oct. 1863	Charles Garton. Thomas Hill.
An improved refrigerator for cooling worts for brewing, or other liquids requiring cooling, and for improving brewers' refrigerators now in use.	2646	26th Oct. 1863	Alfred Blake.
Improved process and apparatus for amalgamating the precious metals. (*Communicated by Jean Baptiste Baux and Alexis Guiod.*)	2819	12th Nov. 1863	William Edward Gedge.
Apparatus for mashing malt for brewing or distilling.	2939	21st Nov. 1863	Douglas William Hamper.
Improvements in machinery for amalgamating or intermixing dry, semi-fluid or aqueous materials, and for agitating solids with liquids, for combining, dissolving or washing the same.	2947	23rd Nov. 1863	Thomas Carr.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MIXING, &c.—*continued.*			
The production of thread, cordage and woven textile fabrics from prepared fibre of hemp or any of the plants known of the order or genus "Cannabis," and in mixing such prepared fibre with cotton, silk or animal wool - -	2950	24th Nov. 1863	St. George Gregg. Thomas Gray.
Means or apparatus for the manufacture of lozenges	3155	14th Dec. 1863	Samuel Smith. Thomas Smith.
An improved oil more especially designed for mixing paints and colors, and a new mode of manufacturing the same. (*Communicated by Adolph Millochau.*)	3207	19th Dec. 1863	George Haseltine.
Apparatus for forcing size or other glutinous substances through pipes, to supply machines for sizing yarns, cloths or other materials.	3225	21st Dec. 1863	James Eastwood.
MOTIVE-POWER MACHINES; OBTAINING MOTIVE-POWER.			
I.—Air, Gas and Wind Engines and Mills; Pneumatic Motive-power.			
Hot air engines - - - - - (*Communicated by Elmer Townsend.*)	155	17th Jan. 1863	George Tomlinson Bousfield.
An improved mode of obtaining and applying motive-power.	261	28th Jan. 1863	Bryan I'Anson Bromwich.
An improved atmospheric engine applicable to purposes to which steam, horse, wind and water power is applied.	281	30th Jan. 1863	Nicholas Philip Comins Lloyd.
Improvements in valves and in apparatus connected therewith.	507	24th Feb. 1863	Edward Ross Walker.
Improved machinery for obtaining and applying motive-power.	653	9th March 1863	Pierre Hugon.
Apparatus for generating carbonic acid - - (*Applicable as a gas engine.*)	732	18th March 1863	Auguste Morel.
Apparatus for the purpose of using air and steam as a motive-power.	981	20th April 1863	Claude Blanc.
An improved atmospheric engine applicable to purposes to which steam, horse, wind and water power is employed.	989	21st April 1863	Nicholas Philip Comins Lloyd.
Improvements in engines, machinery and apparatus for obtaining compressed air, and for applying the power thereof in propelling railway and other carriages - - - - -	1092	30th April 1863	Charles Patrick Stewart. John Kershaw.
Engines for obtaining motive-power by steam, air or any other vapour.	1868	27th July 1863	James Whittaker.
Air and gas engines - - - - (*Communicated by Auguste Nicol Otto.*)	2098	24th Aug. 1863	Richard Archibald Brooman.
Improvements in the generation and production of motive-power to be applied generally, and in its special application to the propulsion of vessels.	2191	5th Sept. 1863	Thomas Moody. Edward Toms Moody.
Pneumatic motive-power machinery - -	2289	17th Sept. 1863	James Whitehead.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MOTIVE-POWER, &c.—*continued.*			
Rotary engines to be worked by water, steam, air and other motive-power.	2365	25th Sept. 1863	Edward Lloyd.
Improvements in the application of steam combined with air as a motive-power and for other purposes.	2620	23rd Oct. 1863	James Parker.
Caloric or heated air engines - - - (*Communicated by Henry Messer.*)	2806	11th Nov. 1863	Walter Davis Richards.
Atmospheric or pneumatic railways and locomotive engines to be used in connection therewith.	2830	13th Nov. 1863	George Remington.
See also "GOVERNORS."			
II.—Steam-engines. (*Stationary, Locomotive, and Marine.*)			
Obtaining motive-power from steam and the products of combustion.	5	1st Jan. 1863	John Thomas Smith.
Traction engines or common road locomotives -	6	1st Jan. 1863	Robert Faulds.
Certain improvements in steam-engines - -	23	3rd Jan. 1863	Harry Jones.
Construction of traction engines - - -	61	7th Jan. 1863	Thomas Aveling.
Improved means or apparatus for preventing overwinding at collieries, and to provide extra breakage power to steam-engines.	71	9th Jan. 1863	John Punshon.
An improved locomotive apparatus - - (*See* "FURNITURE.")	76	9th Jan. 1863	Edmond Alfred Goupil.
Application of power designed for stationary and traction engines, propellers and other machinery. (*Communicated by Perry Dickson and William Ashley Jones.*)	99	12th Jan. 1863	William Edward Newton.
Improvements in obtaining reciprocating motion in steam-engines, and for communicating the same to any ordinary pumps for whatever purpose they may be employed.	166	20th Jan. 1863	Alfred Paul.
An improvement in piston-valves and other pistons (*Communicated by Thomas Skrimton Davis.*)	201	22nd Jan. 1863	William Clark.
Steam-engines - - - - -	206	23rd Jan. 1863	John Milner.
Steam-engines for propelling vessels and for other purposes.	250	28th Jan. 1863	Charles Mace.
Steam-engines - - - - (*For driving screw propellers.*)	252	28th Jan. 1863	Francis William Wymer.
Rotatory engines - - - -	253	28th Jan. 1863	James Platt.
Improvements in supplying air, gases, steam or fluids to iron and other furnaces, and to engines and vessels requiring such supply, and in the apparatus employed therein.	291	31st Jan. 1863	Edward Brown Wilson.
Obtaining and applying motive-power - -	356	9th Feb. 1863	John Macintosh.
Traction engines or common road locomotives -	357	9th Feb. 1863	David Law. John Downie.
Steam-engines - - - - -	389	13th Feb. 1863	John Frederick Spencer.
Apparatus for regulating and working the valves of steam and other engines.	442	18th Feb. 1863	John Frederick Spencer.
Throttle valves - - - - -	482	21st Feb. 1863	Anthony Dugdale.
Steam-engines - - - - -	489	23rd Feb. 1863	Jean Pierre. Florimond Datichy.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MOTIVE-POWER, &c.—*continued.*			
Improvements in valves and in apparatus connected therewith.	507	24th Feb. 1863	Edward Ross Walker.
Improvements in obtaining and applying motive-power, which improvements or parts thereof are applicable for raising, forcing and measuring fluids.	512	24th Feb. 1863	Robert William Thomson.
Escape or relief valves to the cylinders of marine and other steam-engines.	572	28th Feb. 1863	John Penn.
Supplying water to surface condensers of marine engines.	574	28th Feb. 1863	Edward Hayes.
Steam-engines	622	5th March 1863	William Jackson. Richard Watkins.
Locomotive and stationary engines	635	6th March 1863	Alexander Woodlands Makinson.
Steam-engines (*Communicated by Jules Mouvet.*)	637	6th March 1863	William Edward Gedge.
Steam-boilers and engines	652	9th March 1863	William Inglis.
Locomotive boring and winding engines	668	11th March 1863	Andrew Barclay.
Improvements in traction engines and in apparatus for indicating the pressure of steam.	669	11th March 1863	Andrew Barclay.
Valves (*Foot valves.*)	691	14th March 1863	William West.
Locomotives usually called "traction engines" to be used on common roads.	756	21st March 1863	George Arthur Biddell.
Improvements in steam-engines and boilers, part of which improvements is applicable to heating purposes.	825	31st March 1863	John Smethurst.
Steam-engines and generators	872	7th April 1863	John Swinburne. John Stanley.
Improvements in steam-engines and in the means of applying the same to the tilling of land, also in apparatus to be used with such engines in the tilling of land	880	7th April 1863	James Howard. Edward Tenney Bousfield. John Pinney.
A better and more economical mode of securing the bands of locomotive engine and tender springs, also a new method of applying the same	978	20th April 1863	Philip George Rowell. Henry Holt.
Apparatus for the purpose of using air and steam as a motive-power.	981	20th April 1863	Claude Blanc.
Steam-engines	1018	24th April 1863	John Sheppard.
Constructing surface condensers and apparatus for heating and cooling fluids.	1052	27th April 1863	Julius Jeffreys.
Rotatory engines (*Communicated by Wilhelm Heinrich Christian Voss.*)	1094	30th April 1863	John Henry Johnson.
Locomotive engines and tenders	1135	6th May 1863	Archibald Sturrock.
An improved steam or other motive-power engine	1136	6th May 1863	Charles Wilkins Atkinson.
Marine engines	1146	7th May 1863	Charles Arthur Day. Andrew Lamb. Thomas Summers.
Compound steam-engines (*Communicated by Levi Leigh.*)	1149	8th May 1863	Peter Joel Livsey.
Steam-engines (*Communicated by Francis Bowes Stevens.*)	1159	8th May 1863	George Tomlinson Bousfield.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MOTIVE-POWER, &c.—*continued.*			
Improvements in obtaining motive-power, which improvements are applicable in part for raising or forcing fluids into steam-boilers, tanks and other vessels.	1160	9th May 1863	William Thomson.
Rotatory engines - - - - - (*Communicated by Enrico Fava.*)	1175	9th May 1863	John Henry Johnson.
Generating heat and motive-power - - (*See* "FURNACES.")	1220	15th May 1863	Benjamin Shillito. David Moor.
Rotary engines - - - - - (*Communicated by Adrien Jules Alexis Dumoulin.*)	1233	16th May 1863	William Clark.
Improvements in motive-power machinery especially adapted for raising and forcing water and other liquids or fluids, parts of said improvements being applicable to steam-engines and other machines fitted with pistons.	1239	16th May 1863	James Whitehead.
Improvements in apparatus for boring, mining and excavating or cutting, in motive-power engines, and in pressure gauges - -	1322	26th May 1863	James Munro. Robert Scott.
Valves and apparatus for regulating the speed of steam-engines - - - - (*Partly communicated by Frederic Perry.*)	1377	2nd June 1863	George Allam Barrett. William Exall. Charles James Andrewes. Alfred Barrett.
Certain improvements in steam-engines, steam-boilers, and steam heating apparatus.	1399	5th June 1863	Francis Alton Calvert.
Improvements in slide and other valves, and apparatus connected therewith.	1443	10th June 1863	Thomas Adams.
Improvements in obtaining and applying motive-power and in apparatus for the same. (*Communicated by Antoine Merlanchon.*)	1449	11th June 1863	William Clark.
Lubricating apparatus for the cylinders of steam-engines.	1461	11th June 1863	James Johnson.
Reversing levers for locomotive engines and others -	1462	11th June 1863	James Johnson. William Braithwaite.
Traction engines - - - -	1482	13th June 1863	Robert Blackburn.
Certain improvements in engines for obtaining motive-power from steam or other liquid, also partly applicable to pumps. (*Communicated by John Benjamin Root.*)	1499	15th June 1863	William Clark.
Steam-engines - - - - -	1510	16th June 1863	William Neill, junior.
Traction engines - - - - -	1538	19th June 1863	Augustin Morel.
Pistons - - - - -	1568	22nd June 1863	William Rowan.
Construction or arrangement of the working parts of engines for actuating the propelling shafts of steam vessels - - - -	1572	22nd June 1863	William Louis Winans. Thomas Winans.
Improvements in lessening the friction of the rubbing surfaces of the slide valves of engines and of the journals of shafts - - -	1583	23rd June 1863	William Louis Winans. Thomas Winans.
Rotary engines - - - -	1621	29th June 1863	Cyrus Avery.
An improved rotative engine - - -	1662	4th July 1863	Michel Emile Eyth.
Steam-engines - - - - (*Communicated by Auguste Ghilain and Edouard Poncelet.*)	1666	4th July 1863	Henri Adrien Bonneville.
Turbines - - - - - (*Steam turbines.*)	1681	7th July 1863	Christian Schiele.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MOTIVE-POWER, &c.— *continued.*			
Pistons of steam-engines	1711	9th July 1863	Joseph Francis Delany. John Charles Raymond Okes.
Improvements in traction engines and in apparatus for ploughing and tilling land by steam and other power, part of which improvements is also applicable to driving or giving motion to machinery	1726	10th July 1863	Richard Hornsby, junior. John Bonnall. William Astbury.
Metallic pistons	1759	14th July 1863	George Saxon.
Apparatus for condensing steam (*Communicated by Leon Gauchez.*)	1829	21st July 1863	Emile Alcan.
Engines for obtaining motive-power by steam, air, or any other vapour.	1868	27th July 1863	James Whittaker.
Operating the cut-off valves of steam-engines	1900	31st July 1863	Robert Stewart.
Certain improvements in valves for steam-engines	1922	4th Aug. 1863	Samuel Bury. John Price.
Apparatus for regulating the speed of steam and hydraulic engines.	1938	6th Aug. 1863	Joseph Gustave Pinède.
Obtaining and applying motive-power (*Communicated by Pierre Gardere and Charles Patek.*)	2114	26th Aug. 1863	John Henry Johnson.
Certain improvements in steam-engines and in the mode of utilising steam.	2116	27th Aug. 1863	Francis Pragst.
Assistant bearing springs for locomotive engines, railway carriages, waggons and trucks.	2145	31st Aug. 1863	George Attock.
Improved apparatus for directing motion in right lines. (*Working slide valves.*) (*Communicated by Andrew Buchanan and William Alexander Righter.*)	2201	7th Sept. 1863	Alfred Vincent Newton.
Steam-engines	2225	9th Sept. 1863	William Hutchinson.
An improvement in steam-engines (*Communicated by Henry Waterman.*)	2226	9th Sept. 1863	Alfred Vincent Newton.
Locomotive or other steam-engines	2263	15th Sept. 1863	Andrew Barclay.
An improved construction of rotary engine	2316	19th Sept. 1863	Hyde Bateman.
Improvements in machinery applicable to steam and water engines (as motors), which machinery is also applicable to lift and force pumps.	2341	23rd Sept. 1863	James Platt.
Rotary engines to be worked by water, steam, air and other motive-power.	2365	25th Sept. 1863	Edward Lloyd.
Rotary engines worked by steam, water or other motive-power	2429	5th Oct. 1863	William Hoehl. Christopher Brakell. William Günther.
Motive-engines worked by water, steam or other motive-power (*Partly communicated by Albert Westfield.*)	2430	5th Oct. 1863	Christopher Brakell. William Hoehl. William Günther.
Propelling	2431	5th Oct. 1863	John Martin Stanley. Jabez Stanley.
Improvements in taps, cocks, hydrants or valves and apparatus connected therewith, for opening, closing, regulating and facilitating and otherwise controlling the passage or flow of water, air, steam, gas and other fluids and liquids.	2432	5th Oct. 1863	Charles Tomlison.
Improvements in steam-engines and in furnaces and boilers for the same.	2437	5th Oct. 1863	Thomas Ivory.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MOTIVE-POWER, &c.—*continued.*			
Locomotive engines	2458	7th Oct. 1863	Edward Slaughter.
Apparatus used for hauling agricultural implements	2513	13th Oct. 1863	John Fowler.
Valves for double cylinder steam-engines	2516	14th Oct. 1863	Joseph Inchley.
Steam-engines and boilers	2532	16th Oct. 1863	Esau Rowing.
Apparatus for ascertaining the weight of the load supported by the springs of railway locomotives and carriages, for the purpose of regulating or equalizing such load. (*Communicated by Ludwig Starck.*)	2537	17th Oct. 1863	Moritz Meisel.
Rotary engines (*Communicated by George Bradford MacFarland.*)	2542	17th Oct. 1863	William Clark.
Surface condensers for steam and other vapours (*Communicated by George Wagstaff Yapp.*)	2566	20th Oct. 1863	William Snell.
Steam-engines	2588	21st Oct. 1863	Zerah Colburn.
An improved lubricator for steam-engines	2594	22nd Oct. 1863	Henry Wilson.
Improvements in the application of steam combined with air as a motive-power and for other purposes.	2620	23rd Oct. 1863	James Parker.
Improved equilibrium valves for steam-engines and other purposes	2667	28th Oct. 1863	Richard Needham. James Pollitt.
Improvements in surface condensers, also applicable to the refrigeration or cooling of fluids.	2683	30th Oct. 1863	Henry Cochrane.
Machinery for obtaining motive-power by means of steam. (*Steam wheel.*)	2692	30th Oct. 1863	William Verran.
Improvements in machinery for raising and forcing fluids, parts of which improvements are also applicable to steam-engines, blast-engines, exhausters and other machines.	2707	31st Oct. 1863	Stephen Holman.
Apparatus for lubricating the cylinders and other parts of steam-engines.	2769	7th Nov. 1863	James Johnson.
Engines and boilers specially applicable for agricultural purposes. (*Communicated by Jean Baptiste Pierret and André Schweizer.*)	2858	14th Nov. 1863	Richard Archibald Brooman.
Rotatory engines (*Communicated by Enrico Fava.*)	2884	18th Nov. 1863	John Henry Johnson.
Steam-engines (*Marine.*)	2898	19th Nov. 1863	John Elder.
Improvements in steam-engines and in apparatus connected therewith. (*Communicated by Richard Bristol.*)	2927	20th Nov. 1863	John Henry Johnson.
Rotatory engines (*Communicated by Wilhelm Heinrich Christian Voss.*)	2956	24th Nov. 1863	John Henry Johnson.
An invention, firstly, for casting steam cylinders of steam-engines in the form of a segment of a cylindrical ring or circle, and, secondly, for the machine for boring them truly cylindrical and retaining the line of the bore on the curve of a true circle. (*Communicated by Samuel Woodruff and Henry B. Beach.*)	3103	9th Dec. 1863	William Henry Cole.
Improvements in engines for hauling agricultural implements, and also in traction engines.	3126	11th Dec. 1863	Thomas Webb.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MOTIVE-POWER, &c.—*continued.*			
Steam-engines - - - - - - (*Communicated by Victor Barbier.*)	3140	12th Dec. 1863	Richard Archibald Brooman.
Improvements in packing pistons, piston rods and other parts of machinery, and in the preparation of material therefor.	3148	12th Dec. 1863	Peter Ward.
Improvements in steam apparatus for raising and forcing water, applicable to steam navigation and waterworks in general.	3162	15th Dec. 1863	Victor de Stains.
Railway engines, carriages and permanent way for steep inclines.	3182	16th Dec. 1863	John Barraclough Fell.
Locomotive engines and trains for railways, tramways and common roads.	3195	18th Dec. 1863	William Bridges Adams.
Improvements in steam-engines and boilers, and in processes or apparatus to be employed in working the same.	3212	19th Dec. 1863	James Howden.
Improvements in machinery or apparatus for rolling roads, which is also applicable to traction engines and other similar purposes -	3216	21st Dec. 1863	William Clark. William Fothergill Batho
Improved apparatus for lubricating the cylinders of steam-engines.	3218	21st Dec. 1863	Robert Heaton Taylor.
Steam-engines - - - - - -	3219	21st Dec. 1863	Robert Paterson.
Improvements in or applicable to locomotive engines - - - - -	3260	24th Dec. 1863	William Marsden. Francis Henry Stubbs.
Slide valves - - - - - (*Communicated by Louis Amédée Lemaire.*)	3279	28th Dec. 1863	William Clark.
See also "GAUGES." *See also* "GOVERNORS."			
III.—Water-wheels and Engines; Hydraulic Motive-power.			
Improvements in blowing organs and other such musical instruments, parts of which improvements are also applicable to obtaining motive-power for other purposes - - -	323	5th Feb. 1863	William Tudor Mabley. William Thomas Cheetham.
Improvements in valves and in apparatus connected therewith.	507	24th Feb. 1863	Edward Ross Walker.
Improved machinery for obtaining and applying motive-power.	653	9th March 1863	Pierre Hugon.
Improved apparatus for obtaining motive-power -	977	18th April 1863	Thomas Hunt.
A new method for obtaining motive-power - -	1578	23rd June 1863	William Willcocks Sleigh.
An improved machine constructed on self-moving principles for obtaining motive-power. (*Communicated by Jules François Duhamel.*)	1667	4th July 1863	Henri Adrien Bonneville.
A new description of hydraulic engine for raising water and other fluids above their common level, the fluids so raised to be used as a motive-power - - - - - -	1706	9th July 1863	James Smith. Sydney Arthur Cheese.
Hydraulic engines - - - -	1712	9th July 1863	Percy Graham Buchanan Westmacott.
Obtaining hydraulic motive-power - - -	1770	15th July 1863	William Thomas Cheetham.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MOTIVE-POWER, &c.—*continued.*			
Apparatus for regulating the speed of steam and hydraulic engines.	1938	6th Aug. 1863	Joseph Gustave Pinède.
Improvements in apparatus for economizing or regulating water-power used for blowing organs or harmoniums, which improvements are also applicable to other purposes where an irregular motive-power is desired.	2075	21st Aug. 1863	James Eccleston.
Obtaining and applying motive-power - - (*Communicated by Pierre Gardere and Charles Patek.*)	2114	26th Aug. 1863	John Henry Johnson.
Hydraulic apparatus - - - - (*See* "PRESSES.") (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Improvements in machinery applicable to steam and water engines (as motors), which machinery is also applicable to lift and force pumps.	2341	23rd Sept. 1863	James Platt.
Rotary engines to be worked by water, steam, air and other motive-power.	2365	25th Sept. 1863	Edward Lloyd.
Rotary engines worked by steam, water or other motive-power - - - - - -	2429	5th Oct. 1863	William Hoehl. Christopher Brakell. William Günther.
Motive-engines worked by water, steam or other motive-power - - - - - (*Partly communicated by Albert Westfield.*)	2430	5th Oct. 1863	Christopher Brakell. William Hoehl. William Günther.
Obtaining motive-power by certain arrangements of machinery and water.	2652	27th Oct. 1863	Edmond Gibson Atherley.
Machinery for raising and forcing fluids, parts of which improvements are also applicable to steam-engines, blast-engines, exhausters and other machines.	2707	31st Oct. 1863	Stephen Holman.
Improvements in machinery or apparatus for measuring and registering fluids, and in obtaining motive-power from the same.	2790	10th Nov. 1863	John Ramsbottom.
An improved hydraulic motor - - -	2871	16th Nov. 1863	Isidore Pomes.
Apparatus for regulating the passage of aëriform and other fluids. (*Applicable to water-wheels.*) (*Communicated by Charles Joseph Louis Meynard.*) *See also* "GOVERNORS."	3096	8th Dec. 1863	Michael Henry.
IV.—Electro-magnetic Engines; Electro Motive-power.			
Electro-motive engines - - - -	1931	5th Aug. 1863	William Storer. John Hancock.
Improvements in the generation and production of motive-power to be applied generally, and in its special application to the propulsion of vessels -	2191	5th Sept. 1863	Thomas Moody. Edward Toms Moody.
Obtaining motive-power - - - -	2413	2nd Oct. 1863	Johann Ernst Friedrich Lüdeke. Maurice Fischer.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MOTIVE-POWER, &c.—*continued.*			
V.—Mechanical Motive-power; Horse-power.			
A new description of motive-power engine - -	174	20th Jan. 1863	James Smith. Sydney Arthur Chease.
Improvements in lever horse-power machines, the cog gearing employed being applicable to other machines. (*Communicated by Cyrus Avery.*)	397	14th Feb. 1863	George Haseltine.
A new motive apparatus and processes proper for giving to it a continuous motion and unlimited strength.	402	14th Feb. 1863	Henry Dembinski.
Obtaining motive-power - - - - (*Communicated by Reginald Courtenay.*)	573	28th Feb. 1863	Josceline Courtenay.
An improved gravitation engine - - -	781	25th March 1863	Charles Monson.
Apparatus or means for obtaining motive-power -	968	17th April 1863	Robert Henry Lawson. William Darlow.
Apparatus for transmitting, equalizing and registering human power - - -	997	21st April 1863	William Ryan. William Daniel.
Stationary engines or apparatus for obtaining motive-power.	1119	5th May 1863	William Boothroyd.
Motive-power machinery - - - -	1144	7th May 1863	Thomas Small.
Obtaining and applying motive-power - -	1358	30th May 1863	Edward Payson Mosman.
Improvements in locomotive apparatus which is also applicable to other purposes. (*Communicated by Casimir Noël.*)	1447	10th June 1863	William Clark.
Improved arrangements for effecting or aiding in effecting the locomotion of land carriages or vehicles and floating vessels, by manual power or other primary motive agency.	1632	1st July 1863	Thomas Williams.
Improvements in lever horse-power machines, the cog gearing employed being applicable to other machines. (*Communicated by Cyrus Avery.*)	1701	8th July 1863	George Haseltine.
A new machine for obtaining motive-power -	1968	10th Aug. 1863	Patricio Marcos Del Rio.
An improved machine for obtaining perpetual motion.	2093	24th Aug. 1863	Louis Guillemot.
Motive-power machinery - - -	2304	18th Sept. 1863	Thomas Small.
An improved apparatus for obtaining motive-power (*Communicated by Frederico Salomone.*)	2314	19th Sept. 1863	Ignazio De Angelis.
Certain improvements in obtaining centrifugal motive-power - - - -	2518	14th Oct. 1863	Marcelin François. Dorothé Cavalerie.
Apparatus or means for obtaining motive-power -	2547	17th Oct. 1863	William Darlow. Robert Henry Lawson.
Obtaining motive-power by certain arrangements of machinery and water.	2652	27th Oct. 1863	Edmond Gibson Atherley.
Endless chain horse-powers - - - (*Communicated by Stuart Perry.*)	2809	11th Nov. 1863	George Haseltine.
Certain improvements in apparatus or mechanism for obtaining and applying motive-power.	3277	28th Dec. 1863	Edwin Bramall.
Improvements in apparatus for obtaining motive-power applicable to the working of pumps and other machinery.	3288	29th Dec. 1863	James Price.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MOULDINGS AND ARCHITECTURAL ORNAMENTS.			
Machinery or apparatus for manufacturing bricks, tiles, pipes and mouldings.	647	9th March 1863	James Cowley.
Hardening and colouring gypseous limestone and sand and calcareous stones. (*For friezes, balustrades, &c.*) (*Communicated by Pascal Nicolas Balthazar Fioravanti.*)	940	14th April 1863	Richard Archibald Brooman.
Improvements in apparatus for manufacturing beton and artificial stone, pugging clay, and other similar purposes, and in the production of artificial stone, and artistic, ornamental and decorative articles, works and surfaces. (*Imitation relievos, carvings, &c.*) (*Communicated by François Coignet.*)	1086	29th April 1863	Michael Henry.
Production of show tablets, advertisement tablets, name plates, architectural facings and decorations, and other ornamental, decorative and inscriptive articles - - - - -	1111	4th May 1863	John Morris Johnson. Edmund Johnson. Charles Johnson. Louis Bertling.
Improvements in laying veneers on to surfaces, in applying the glue for that purpose, and in the apparatus employed.	1161	9th May 1863	James Stickland.
Improvements in the manufacture of certain descriptions of iron tubing, and in the means of producing and applying an ornamental case to the same, which said means are also applicable to the production of ornaments in metal for other purposes - - - - - (*Fretwork.*)	1300	23rd May 1863	Ferdinand Potts. John Key.
Mode of producing ornamental surfaces applicable to the general purposes of decoration. (*Ornamental walls and floors.*)	1335	28th May 1863	Francis Robert Piltz.
Improvements applicable to the ornamentation or decoration of articles of furniture, part of which improvements may also be applied for architectural ornamentation.	1471	12th June 1863	Thomas Charles March.
Improvements in the manufacture of pillars, posts, columns, mouldings and buildings, when corrugated metal is employed, and in machinery used in corrugating, moulding and shaping metal for such purposes.	1792	16th July 1863	Edwin Maw.
Means or apparatus for coating wood and other surfaces. (*Mouldings.*)	2349	24th Sept. 1863	William White.
Improvements in shears for cutting metals and other substances. (*Platbands or fillets.*) (*Communicated by Hugues François Aubert.*)	2501	12th Oct. 1863	William Edward Gedge.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MUSICAL INSTRUMENTS; MUSIC STOOLS; TURNING OVER LEAVES OF MUSIC; PRINTING MUSIC.			
A new or improved instrument or apparatus to be attached to pianofortes, organs and other similar keyed musical instruments, for printing the score of any music performed on the said instruments.	101	13th Jan. 1863	Joseph Beverley Fenby.
A new and improved musical instrument of the harmonica class.	165	19th Jan. 1863	Bertram Van Der Mark.
Rendering drum skins and gut strings less liable to hygrometric influences.	222	24th Jan. 1863	Antoine Joseph Sax.
Improvements in blowing organs and other such musical instruments, parts of which improvements are also applicable to obtaining motive-power for other purposes.	323	5th Feb. 1863	William Tudor Mabley. William Thomas Cheetham.
Apparatuses for tuning pianofortes - - - (*Communicated by François Delsarte.*)	330	5th Feb. 1863	Richard Archibald Brooman.
Construction of pianofortes - - - -	386	13th Feb. 1863	Stephen Mountcashel Innes.
Construction of wind instruments of music - (*Communicated by Ambroise Santucci.*)	483	21st Feb. 1863	William Edward Newton.
Construction of flutes - - -	617	5th March 1863	John Clinton.
Construction of pianofortes - - -	709	16th March 1863	William Glen Eavestaff.
Organs, harmoniums and pianofortes - - -	722	18th March 1863	John Roberts. Robert Naylor.
An improvement in pianofortes - - -	1077	29th April 1863	William Tarr. Enoch Farr.
Construction of orchestras - - - - -	1304	23rd May 1863	Frederick Kingsbury.
Apparatus for ruling paper and other materials, either alone or in combination with typographical or lithographical printing. (*Ruling music paper.*) (*Communicated by Bonaventure Tournier.*)	1320	25th May 1863	William Clark.
Musical instruments - - - -	1401	5th June 1863	Arthur Quentin De Gromard.
Improvements in apparatus for turning over the leaves of music and other books.	1551	20th June 1863	James Langdon Clarke.
Construction of seats, chairs, sofas, lounges and other similar articles of furniture. (*Music stools.*) (*Communicated by François Carré.*)	1687	7th July 1863	William Edward Gedge.
Pianofortes - - - - -	1897	31st July 1863	Benjamin Johnson.
Improvements in apparatus for economizing or regulating water-power used for blowing organs or harmoniums, which improvements are also applicable to other purposes where an irregular motive-power is desired.	2075	21st Aug. 1863	James Eccleston.
Improved apparatus for turning over the leaves of music.	2205	8th Sept. 1863	John Crowgey Lott.
Improvements in increasing, diminishing or otherwise regulating the power and tone of organs, harmoniums, pianofortes, or other instruments with similar keys or key-boards - -	2291	18th Sept. 1863	John Roberts. Robert Naylor.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
MUSICAL INSTRUMENTS, &c.—*continued.*			
Musical instruments (*Communicated by Louis Etienne Dorgal, Jules François Guesné and François Coré.*)	2894	30th Sept. 1863	William Clark.
Musical instruments	2490	10th Oct. 1863	John Wesley Goundry.
Improved arrangements for facilitating the teaching and playing of stringed instruments of the character of the violin, viola, violoncello, double bass and guitar	2729	4th Nov. 1863	Robert Brooks. Charles Inwards.
Pianofortes	2821	12th Nov. 1863	George Henry Brockbank.
Improvements in the construction of music stools, tables and other articles of furniture, and in means of securing such articles to floors.	2877	17th Nov. 1863	Frederick William Burton.
Making hammers for pianofortes	2918	20th Nov. 1863	Amand Hyacinthe Ferry.
NAILS AND SPIKES; BOLTS AND RIVETS; SCREWS AND SCREW-BLANKS; NUTS AND WASHERS; SCREW-STOCKS AND DIES, T FASTENINGS.			
Rivet making machinery	103	13th Jan. 1863	David Tannahill. John Tannahill.
Machinery for manufacturing nails or brads	108	13th Jan. 1863	William Southwood.
Improvements in the soles and heels of boots and shoes, in studs, nails, tips and toe or other plates used therewith, and in placing and securing them.	116	14th Jan. 1863	William Pidding.
Machinery for the manufacture of bolts, spikes, rivets and screw blanks.	292	2nd Feb. 1863	Frederic Groom Grice.
Improvements in machinery for the cutting of chives, bungs, corks, spiles and vent or other pegs, and also in machinery for manufacturing the knives or cutters employed therein, such machinery being also applicable to the manufacture of trenails and other cylindrical and conical articles.	352	7th Feb. 1863	George Redrup.
An improvement or improvements in the manufacture of iron for making nails.	353	7th Feb. 1863	David Groucutt.
Certain improvements in cutting or producing screws or threads, and in apparatus connected therewith.	404	14th Feb. 1863	William Wood.
Machinery for the manufacture of nails	615	5th March 1863	William Whittle.
A new and useful or improved yellow metal sheathing nail or spike, which by means of a nail cutting engine is cut from yellow sheathing metal.	739	19th March 1863	Samuel Leonard Crocker.
Machinery for shaping metal and plastic substances (*Bolts, pins and rivets.*)	819	30th March 1863	Hesketh Hughes.
Screw cutting lathes	912	10th April 1863	Josiah Gimson.
Adjustable wrenches for nuts, pipes and pins	987	21st April 1863	Joshua Heap.
Wrenches (*For nuts.*) (*Communicated by Louis Schwartzkopff.*)	994	21st April 1863	William Edward Newton.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
NAILS, &c.—*continued.*			
Machinery or apparatus for forging and dressing horse-shoe and other nails. (*Communicated by Charles Alexandre Louvrier.*)	1133	6th May 1863	George Davies.
An instrument or holder for holding nails, screws or other fastenings.	1155	8th May 1863	Justus Charles Droop.
Improvements in nails or rivets for boots and shoes, applicable to other purposes.	1211	14th May 1863	John Satchwell. William Henry Ashford. Cornelius Harrison.
Machinery for making screw rivets, nails or pins -	1246	18th May 1863	Samuel Toy.
An improved construction of marline spike - (*Communicated by Albin Warth.*)	1369	1st June 1863	Alfred Vincent Newton.
A new and useful device for turning cross-head wrists or pins, or for turning any cylindrical part of machinery which is secured between two arms (*Communicated by Walter Scott Phelps.*)	1416	8th June 1863	William Clark.
Manufacture of nails and spikes - - -	1487	13th June 1863	Isaac Gray Bass. William Bass.
An improved machine for making bolts, rivets and spikes.	1531	18th June 1863	Edward Gossiaux.
Machinery for the manufacture of bolts and rivets - (*Communicated by Jacques Victor Gauthier.*)	1536	19th June 1863	Henri Adrien Bonneville.
Improvements in the construction and protection of ships, vessels and floating batteries, and in the preparation and arrangement of materials for those purposes, some of such improvements being applicable to the construction and protection of land fortifications. (*Construction of bolts.*)	1929	5th Aug. 1863	George Clark.
Machinery for the manufacture of rivets - -	1939	6th Aug. 1863	William Proder Hodgson. John Vaux Woodifield.
Improvements in the method of fastening hoops for packing bales, and in the machinery or apparatus employed therein. (*Rivets.*)	1967	10th Aug. 1863	John Alexander Fullarton.
Improvements in the nails commonly called screw rivets, which improvements are also applicable to other nails and spikes - - -	1988	12th Aug. 1863	John Cornforth. Alfred Andrews.
Certain improvements in means to be employed for securing the ends of bands in packing "bale goods," and in machinery for manufacturing rivets to be employed for the purpose, and also in apparatus for forming apertures in the aforesaid bands or hoops - - -	2148	31st Aug. 1863	George Bebbington. Jonathan Robert Hampson.
Certain improvements in the manufacture of nails and other similar articles.	2174	3rd Sept. 1863	Amand Louis Durand.
An improvement in T fastenings - - -	2299	18th Sept. 1863	Herbert William Hart.
Manufacture of boots and shoes - - - (*Making the pegs.*)	2411	1st Oct. 1863	James John Anderton.
Improvements in the construction of iron and other ships, vessels and batteries of war, and of cupolas and armour plates applicable thereto, parts of which improvements are also applicable to other useful purposes. (*Screws, bolts and washers.*)	2690	30th Oct. 1863	Barnabas Russ.
Permanent way of railways and fastenings for the same - - - - -	2722	4th Nov. 1863	James Livesey. John Edwards.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
NAILS, &c.—*continued.*			
Improvements in fastening together the parts of ships and vessels, and in respect to the more efficient caulking of the seams thereof.	2756	6th Nov. 1863	Robert Saunders.
Improvements in machinery for the manufacture of bolts, nuts, spikes and rivets, and also in furnaces for heating blanks to be formed into such articles.	2936	21st Nov. 1863	Francis Watkins.
Construction of ships of war and other vessels - (*Form of bolt.*)	3036	2nd Dec. 1863	Charles Lungley.
Machinery for the manufacture of nails and rivets -	3118	11th Dec. 1863	Edmund Darwen. John Haddon.
Manufacture of nuts - - - - - (*Communicated by Jean François Fuzellier Leger.*)	3132	11th Dec. 1863	Richard Archibald Brooman.
Certain improvements in means to be employed for securing the ends of bands in packing "bale goods," and in machinery for manufacturing "holdfasts" to be employed for the purpose.	3244	23rd Dec. 1863	Richard Edward Van Hees.
OIL-CLOTHS, FLOOR-CLOTHS, TABLE-COVERS AND FURNITURE COVERS; TARPAULING, RICK-CLOTHS, TENT-COVERS; KAMPTULICON.			
Compound waterproof and ornamental fabrics -	57	7th Jan. 1863	Thomas Storey.
Improvements in fabrics for covering floors, walls, roofs and other surfaces or objects, which fabrics are also partly applicable to the manufacture of waterproof articles.	232	27th Jan. 1863	Henry Henson Henson.
An improved composition for the coating and preservation of canvas and other materials to make them waterproof and non-inflammable. (*For tarpauling.*)	735	19th March 1863	Ellis Lever.
Certain improvements in the method of producing surfaces in imitation of woods, and in printing therefrom.	779	25th March 1863	Joseph Hardman Worrall.
Improvements in the manufacture of fabrics for covering floors and other surfaces, and in the apparatus employed therein.	1037	25th April 1863	Frederick Walton.
The preparation of a fluid for renewing the surface of japanned and enamelled leathers and cloths.	1298	23rd May 1863	William Hoey.
Improvements in the manufacture (by the introduction of cocoa nut husk or part thereof) of a substitute for ordinary felt and kamptulicon, and in utilising said cocoa nut husk or part thereof for packing of wine coolers, refrigerators and ice chests, and caulking of ships and vessels.	1423	8th June 1863	Henry Reynell.
Using Apo-elastikon hyphrasma as a new and improved cloth for floors, roofs, walls, tanks and other linings, being impervious to damp and of great strength and durability.	1603	25th June 1863	William Kirrage.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
OIL-CLOTHS, &c. — *continued.*			
An improved waterproof material - - - (*For covering floors.*) (*Communicated by Jules Wiese.*)	1835	1st July 1863	William Snell.
Improvements in the manufacture of mats, floor-cloths or coverings for floors, straps, bands, ropes and other analogous articles which are usually made of textile or fibrous materials. (*Communicated by Placide Peltereau.*)	1831	21st July 1863	William Edward Newton.
Improvements in making all woven and thready fabrics waterproof, and in finishing or surfacing fabrics generally. (*For awnings and tents.*) (*Communicated by Etienne Guillaume.*)	1836	22nd July 1863	Charles Beslay.
Improvements in the manufacture of floor-cloths and coverings and similar fabrics, and in pavements.	3210	19th Dec. 1863	Frederick Walton.
OILING OR LUBRICATING; MATERIALS FOR OILING; OIL-CANS AND LUBRICATORS.			
Improvements in machinery for lifting bobbins off spindles in spinning machines, and in lubricating spindles. (*Communicated by Louis François Filleul and Dominique Jarriel.*)	107	13th Jan. 1863	Richard Archibald Brooman.
Treating rock oil, petroleum, paraffine oil, coal oil and paraffine and other like mineral oils and products therefrom.	247	28th Jan. 1863	Elijah Freeman Prentiss. John Carrington Sellars.
Improvements in treating petroleum oil, and in the combination thereof with other oils for lubricating and other like purposes.	605	4th March 1863	Joseph de Keyser.
Lubricating horizontal shafting and bearings of all descriptions - - - - - -	769	24th March 1863	James Reilly. William Martin.
An improved method of lubricating - - - (*Communicated by Edwin P. Quadling.*)	838	1st April 1863	Michael Henry.
Certain improvements in apparatus for supplying oil or other liquid lubricant to frictional surfaces.	901	9th April 1863	George Ferrand.
A new compound to be used as a lubricator -	1020	24th April 1863	Robert Lavender.
Certain parts of machinery for preparing and spinning cotton and other fibrous substances.	1028	25th April 1863	Charles Pooley.
Construction of turntables - - - - (*Communicated by Signore Rombeaux.*)	1150	8th May 1863	Alexander Skwarcow.
A new lubricating material or compound - -	1217	14th May 1863	Frederick Keate Erlam.
Improvements in preventing the fouling of the bottoms and sides of ships and vessels, particularly applicable to ships and vessels constructed of or sheathed with iron.	1232	16th May 1863	Frederick Maun Burns.
Construction of self-lubricating bearings for shafts and axles - - - - -	1261	20th May 1863	Henry Wren. John Hopkinson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
OILING, &c.—*continued.*			
Improvements in means of and apparatus for preparing, spinning, twisting and doubling wool, cotton and other fibrous substances, and in lubricating the spindles and other parts of machinery used in these and other operations.	1318	25th May 1863	Martyn John Roberts.
Manufacture or preparation of lubricating material (*Communicated by François Janssens.*)	1355	29th May 1863	John Henry Johnson.
Lubricating apparatus for the cylinders of steam-engines.	1461	11th June 1863	James Johnson.
An improved mode of oiling journals or axles - (*Communicated by Henry Wood.*)	1478	13th June 1863	George Davies.
Certain improvements in engines for obtaining motive-power from steam or other liquid, also partly applicable to pumps. (*Communicated by John Benjamin Root.*)	1499	15th June 1863	William Clark.
Improvements in treating oil from shale or other bituminous minerals, and similar oils, to obtain various products therefrom, and in apparatus therefor. (*Lubricating oil.*)	1564	22nd June 1863	John M^{c}Lean.
An improved lubricating matter or composition -	1678	6th July 1863	Henry Caunter.
Brick machines - - - - - (*Communicated by Isaac Gregg.*)	1692	8th July 1863	George Haseltine.
Improvements applicable to the rollers of machines employed for spinning fibrous materials whilst in a wet state.	1765	14th July 1863	James Logan Todd.
Pyramid and other cans or feeders for oil and other liquids.	1835	22nd July 1863	Joseph White.
An improved rotary pump - - - -	1975	11th Aug. 1863	Edward Myers. Hugh Forbes.
Improvements in axles and axle-boxes and the parts of wheels immediately connected therewith.	2018	14th Aug. 1863	William Asbury.
Processes and preparations employed in spinning wool. (*Communicated by Edmund Lepainteur.*)	2039	17th Aug. 1863	Henri Adrien Bonneville.
An improved lubricator - - -	2040	17th Aug. 1863	William Longbottom.
Improvements in lubricating and in arrangements and mechanism for lubricating the bearings, journals or steps of spindles, shafts, axles and other mechanism.	2043	17th Aug. 1863	James Stead Crosland.
Improvements in breech-loading and other ordnance, part of which is applicable to the utilizing of old smooth-bore cannon, and in projectiles to be used therewith.	2156	1st Sept. 1863	Jacob Snider, junior.
An improved lubricating compound - -	2254	14th Sept. 1863	William Ross Hutton.
Improvements in lubricating journals of revolving shafts and axles, and in the apparatus employed for that purpose - - - - -	2343	23rd Sept. 1863	William Galloway. John Galloway.
Packing for stuffing-boxes and pistons - -	2415	2nd Oct. 1863	James Tees.
Lubricating the axles of railway carriages - - (*Communicated by Joseph Wood.*)	2419	2nd Oct. 1863	William Augustus Torrey.
Improvements in taps or cocks, part of which improvements is applicable to the lubrication and protection of the journals of revolving shafts, axles or spindles.	2492	12th Oct. 1863	Alexander Inglis.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
OILING, &c.—*continued.*			
An improved lubricator for steam-engines - -	2594	22nd Oct. 1863	Henry Wilson.
An improved instrument for lubricating rifles and other descriptions of fire-arms, also ordnance.	2633	24th Oct. 1863	Alexander Sellar.
Certain improvements in apparatus for applying adhesive substances to spindles employed in spinning cotton and other fibrous materials, and for the lubrication thereof.	2661	28th Oct. 1863	James Marshall.
Manufacture of lubricating compounds - -	2677	29th Oct. 1863	John Robert Johnson.
Apparatus for oiling wool - - -	2687	30th Oct. 1863	Martyn John Roberts.
An improved apparatus for the lubrication of bearings, shafts or other parts of machinery subject to friction.	2723	4th Nov. 1863	Pierre Augustin Sautreuil.
Axle-boxes - - - - - - (*In part communicated by Eugene Thétard.*)	2759	6th Nov. 1863	Walter Montgomerie Neilson.
Improvements in machinery for ginning and cleaning cotton, a part of which are applicable to machines for other purposes.	2765	7th Nov. 1863	Horace Leeman Emery.
Apparatus for lubricating the cylinders and other parts of steam-engines.	2769	7th Nov. 1863	James Johnson.
Machinery for preparing cotton to be spun - -	2906	19th Nov 1863	Richard Walker. John Scholes Walker. Benjamin Brown.
Improvements in the manufacture of metal drums and cans for holding oils and other fluid matters, and in furnaces used in such manufacture.	2911	19th Nov. 1863	William Benjamin Hodson.
Improvements in lubricating the shafts of the conducting pulleys of mules, which improvements are also applicable to machinery in general.	3028	2nd Dec. 1863	Thomas Thornber England.
Apparatus for preventing the explosion of steam-boilers.	3111	10th Dec. 1863	Henry Turner.
Machinery for manufacturing bricks - -	3199	18th Dec. 1863	Henry Clayton.
Improvements in oil cans and in apparatus for lubricating.	3215	21st Dec. 1863	William James Dixon.
Improved apparatus for lubricating the cylinders of steam-engines.	3218	21st Dec. 1863	Robert Heaton Taylor.
Manufacture of lubricating matter or composition -	3290	29th Dec. 1863	Henry Caunter.
Production of hydro-carbon and other oils from gas tar, coal tar, gas pitch, asphalte, coal, and other bituminous substances.	3296	30th Dec. 1863	Thomas Barnes Cochrane, Earl of Dundonald.
OILS FROM SEEDS, &c.; TREATING OILY AND FATTY MATTERS; ANIMAL OILS.			
Method of and apparatus for purifying, bleaching and refining oils, and oily and fatty matters.	26	3rd Jan. 1863	Stephen White.
Vessels in which to cool and transport fatty or oleaginous matters, such as tallow, lard, palm oil and the like.	146	16th Jan. 1863	John Geno Winter. Carroll Eugene Gray.
An improved mode of refining and purifying oils -	579	2nd March 1863	John Watson Burton.
Treating fats and fatty oils, and volatile oils or essential oils.	817	30th March 1863	Thomas Barnes, Earl of Dundonald.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
OILS, &c.—*continued.*			
An improved medicated oil for the preservation of metal, wood or stone.	910	10th April 1863	Robert Smith.
Construction and arrangement of machinery and apparatus for the manufacture of oil.	960	16th April 1863	Alexander Samuelson.
A filtering apparatus for treating by pressure oils, syrups, and all sorts of liquids susceptible of filtering. (*Communicated by Edmund Marquis de Ruffo Bonneval and Joseph Mouren.*)	1027	24th April 1863	John Henry Johnson.
Presses - - - - - - -	1376	2nd June 1863	David Wilson. Edward Alfred Cowper.
Preparation of castor and other oils for medicinal use.	1422	8th June 1863	Robert Charles Furley.
Improved fleeting hydrostatic machinery adapted to presses, dry docks, slips, or the moving or lifting of heavy masses, parts of which are applicable to the expressing of oil or other fluids.	1591	24th June 1863	Paul Rapsey Hodge.
Mode of purifying oils - - -	1719	10th July 1863	Peter Augustin Godefroy.
Certain improvements in the mode of treating fatty bodies.	1778	16th July 1863	Hypolite Mége.
Apparatus for working hydraulic presses - -	1850	24th July 1863	John Kirkland.
Improvements in expressing and filtering oil from seeds, and liquids from other substances containing the same, and in apparatus employed therein. (*Communicated by Guillaume Cregut and Tschiffeli, Brothers.*)	2078	21st Aug. 1863	Richard Archibald Brooman.
Hydraulic apparatus - - - - (*For manufacture of stearine.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Extraction or manufacture of oils from vegetable substances - - - - -	2315	19th Sept. 1863	Thomas Richardson. John James Lundy. Robert Irvine.
Certain improvements in the expression of oil from oil yielding substances, and in the production of oil cake and other residuary matters.	2648	27th Oct. 1863	John Marshall.
Improvements in the manufacture of metal drums and cans for holding oils and other fluid matters, and in furnaces used in such manufacture.	2911	19th Nov. 1863	William Benjamin Hodson.
Improvements in extracting essences and perfumes, and also oils and fats from matters containing them, also in bleaching and purifying oils and fats, and in apparatus employed therein.	2987	27th Nov. 1863	Heinrich Hirzel.
Apparatus to be employed in expressing oils and fatty matters.	3018	1st Dec. 1863	James Thom.
Improvements in obtaining purified or refined oils and in obtaining oil cakes from cotton seed and other vegetable substances, also in refining or purifying cod liver oil - - - -	3114	10th Dec. 1863	John Anthony Pols. Peter Owen Bernard.
An improved oil more especially designed for mixing paints and colors, and a new mode of manufacturing the same. (*Communicated by Adolph Millochau.*)	3207	19th Dec. 1863	George Haseltine.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
Oils of Tar, Bitumen and Resin; Naphtha, Paraffine, &c.; Mineral Oils; Hydro-carbons.			
Method of and apparatus for purifying, bleaching and refining oils, and oily and fatty matters.	26	3rd Jan. 1863	Stephen White.
Improvements in the treatment of petroleum and mineral oils, and in apparatus employed therein.	48	6th Jan. 1863	Edward Vincent Gardner.
Treating rock oil, petroleum, paraffine oil, coal oil and paraffine, and other like mineral oils and products therefrom - - - -	247	28th Jan. 1863	Elijah Freeman Prentiss. John Carrington Sellars.
Improvements in treating coal tar dead oils and for producing phenic or carbolic acid. (*Communicated by Jean Jaques Müller.*)	395	13th Feb. 1863	Jules Albert Schlumberger
Treatment of mineral oils - - -	551	27th Feb. 1863	Henry Fehr.
Improvements in treating petroleum oil and in the combination thereof with other oils for lubricating and other like purposes.	605	4th March 1863	Joseph De Keyser.
Projectiles or ignition missiles - - - (*Producing a solution of phosphorus.*)	797	26th March 1863	John Norton.
Treating fats and fatty oils, and volatile oils or essential oils.	817	30th March 1863	Thomas Barnes, Earl of Dundonald.
Stills for the distillation of petroleum and other heavy oils.	849	2nd April 1863	John Cassell.
Improvements in the extraction of hydro-carburets from minerals, in the distillation thereof, and in apparatus employed therein. (*Communicated by Felix Alexandre Testud de Beauregard.*)	1209	13th May 1863	Richard Archibald Brooman.
Treatment of mineral oils and hydro-carbons. (*Communicated by Louis Martin.*)	1268	21st May 1863	John Cassell.
Distillation of coal tar, tar oil, resin, resin oils, all hydro-carbons, petroleum or other mineral or vegetable oils and spirits derived therefrom.	1295	23rd May 1863	William Cormack.
Improvements in the distillation and separation of hydro-carburets and their derivatives, and in apparatus for the same. (*Communicated by Jean Théodore Coupier.*)	1405	5th June 1863	William Clark.
An improved oil more especially designed for mixing paints and colors, and new mode of manufacturing the same. (*Communicated by Adolph Millochau.*)	1546	20th June 1863	George Haseltine.
Improvements in treating oil from shale or other bituminous minerals, and similar oils, to obtain various products therefrom, and in apparatus therefor.	1564	22nd June 1863	John M'Lean.
Mode of purifying oils - - - -	1719	10th July 1863	Peter Augustin Godefroy.
Processes and preparations employed in spinning wool. (*Communicated by Edmund Lepainteur.*)	2039	17th Aug. 1863	Henri Adrien Bonneville.
Construction of retorts or ovens for extracting oil from certain descriptions of cannel coal or other bituminous substances.	2080	21st Aug. 1863	Robert Griffiths.
Improved method of storing and holding petroleum and other oils, naphtha, and other products of distillation containing essential oils. (*Communicated by Seth Haskell Ingalls.*)	2115	27th Aug. 1863	Theodore Bourne.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
OILS, &c.—*continued.*			
Purification and disinfection of hydro-carburets and especially of oils produced by the distillation of coal, schist and bog-head. (*Communicated by Jean Eugéne D'Arcet.*)	2234	10th Sept. 1863	William Clark.
An improved method of constructing magazines for the safer and more economical storing of volatile oils in localities where the ground and labor are expensive. (*Communicated by Moritz Pinner.*)	2306	19th Sept. 1863	James Fraser.
Extraction or manufacture of oils from vegetable substances.	2315	19th Sept. 1863	Thomas Richardson. John James Lundy. Robert Irvine.
Manufacture of casks and other receptacles for containing oil, petroleum and other liquids.	2347	23rd Sept. 1863	Augustus Collingridge.
An improved mode or method of storing petroleum and other like oils and spirits.	2486	10th Oct. 1863	Samuel Banner.
Means and method of purifying hydro-carbons -	2502	12th Oct. 1863	Charles Humfrey the younger.
Treating Canadian petroleum and other mineral oils of a similar nature.	2642	26th Oct 1863	James Nicholas.
Deodorizing petroleum and other mineral oils -	2802	11th Nov. 1863	John Fottrell.
Improvements in distilling hydro-carbons from coal shale and other bituminous substances, and in apparatus employed for that purpose.	2812	12th Nov. 1863	John Craig.
Improvements in apparatus for the distillation of coal and peat, and such other substances as are or may be used for the manufacture of solid and liquid volatile hydro-carbons, or for the manufacture of the said hydro-carbons and coke.	2886	18th Nov. 1863	William Mattie Williams.
Apparatus employed in the manufacture of paraffin and other like oils from shale, cannel and other minerals.	2963	25th Nov. 1863	George Parkin.
Improvements in furnaces and apparatus for the manufacture of volatile hydro-carbons, which improvements are also in part applicable to furnaces and apparatus for the manufacture of illuminating gas.	2981	27th Nov. 1863	Frederic Page.
Production of hydro-carbon and other oils from gas tar, coal tar, gas pitch, asphalte, coal and other bituminous substances.	3296	30th Dec. 1863	Thomes Barnes Cochrane, Earl of Dundonald.
OPTICAL INSTRUMENTS, STEREOSCOPES, CAMERAS; OPTICAL ILLUSIONS.			
A new apparatus for multiplying indefinitely the reflections of all objects that are capable of being viewed in it.	102	13th Jan. 1863	Thomas Boyle.
Microscopes - - - - - (*Communicated by Conrad von Rappard.*)	141	15th Jan. 1863	William Edward Newton.
Apparatus to be used in the exhibition of dramatic and other like performances - - -	326	5th Feb. 1863	Henry Dircks. John Henry Pepper.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
OPTICAL INSTRUMENTS, &c.—*continued.*			
Improvements in indicating the locality of fire, applicable also to denoting the position of ships. (*Telescope and tracer.*)	1055	27th April 1863	William Henry James.
Stereoscopes - - - - - -	1204	13th May 1863	Victor Julien Cassaignes.
Construction and arrangement of nautical and surveying instruments for measuring angles and altitudes. (*Object glasses and reflectors.*)	1717	9th July 1863	George Gowland.
Apparatus for producing optical illusions - -	1917	3rd Aug. 1863	John Munro, or John Munro Graham.
Apparatus for producing optical illusions for stage effect in theatres or exhibitions.	2019	15th Aug. 1863	John William Hoffman.
Means of keeping cameras or other apparatus steady when suspended to balloons.	2028	15th Aug. 1863	Johann Ernst Friedrich Lüdeke.
An improved mode of and apparatus for producing by the aid of photography optical illusions of moving animals and bodies - - - -	2063	19th Aug. 1863	Gaetano Bonelli. Henry Cook.
A new division of time and the application thereof to mathematical and other instruments. (*Applicable to optical instruments.*)	2107	26th Aug. 1863	Santini Fattorini.
Improvements in the manufacture of the prisms, lenses and glasses of stereoscopes, and in ornamenting glass.	2618	23rd Oct. 1863	Victor Julien Cassaignes.
Opera glasses, telescopes, microscopes, spectacles and other optical instruments.	2699	31st Oct. 1863	Samuel Hickling Parkes.
Spectacles and hand-frames - - -	2771	7th Nov. 1863	Lewis Braham.
Producing dramatic and other like effects on the stage or in a room.	2841	14th Nov. 1863	De Bosco Hughes.
Apparatus for exhibiting dissolving views - -	3089	8th Dec. 1863	Peter Hubert Desvignes.
Improvements in apparatus for producing optical illusions, which may be used for dramatic and other entertainments.	3209	19th Dec. 1863	Charles Bolton.
Improvements in apparatus for exhibiting the flow of real water and other effects, applicable to theatrical purposes.	3272	26th Dec. 1863	Edward Tyrrel Smith.
OVENS AND KILNS.			
Ovens, hot plates and cooking apparatus - -	94	12th Jan. 1863	Ebenezer Stevens.
Cooking-stoves - - - - - -	443	18th Feb. 1863	John Henry Bly.
Ovens or kilns for firing, burning or baking pottery, bricks, tiles and other earthen or ceramic articles.	471	21st Feb. 1863	Charles Malpas.
Improvements in machinery for digging, compressing and moulding peat or turf, and for retorts and kilns for drying peat or turf, and making peat or turf charcoal, through the agency of hydro-caloric or superheated steam, and for collecting the products of distillation whilst charring the peat or turf.	528	25th Feb. 1863	Thomas Vincent Lee.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
OVENS, &c.—*continued.*			
An improved method of applying heat in the manufacture and refining of sugar, and in malting, hop drying, brewing, distilling and vinegar making.	584	2nd March 1863	Charles Garton.
Apparatus for indicating any regulated maximum or minimum degree of temperature. (*For ovens.*) (*Communicated by Alexander Ross.*)	670	11th March 1863	John Werge.
Ovens and apparatus for heating the same -	765	23rd March 1863	Thomas George Grant.
Improvements in furnaces which are principally applicable to the smelting of iron - - (*Combining coke and gas ovens with furnaces.*)	972	18th April 1863	Charles William Siemens. Frederick Siemens.
Improvements in drying and cooling grain, and in the machinery or apparatus employed therein. (*Communicated by William Henry Sutton and James John Gibson.*)	1066	28th April 1863	John Henry Johnson.
Glass and other furnaces or kilns - -	1189	12th May 1863	Thomas Warren.
Improvements in the manufacture of bread and in apparatus used for the same.	1241	18th May 1863	William Watson.
Brick kilns - - - - - -	1276	21st May 1863	Abraham Thomalley.
Improvements in coke ovens and in building and heating ovens or retorts for generating coal gas connected therewith.	1287	22nd May 1863	George Stevens.
Obtaining certain products from hops - -	1428	9th June 1863	George Hills.
Improvements in instruments or apparatus to be used in the manufacture of glass finger plates and other articles made of glass, and in kilns for annealing articles made of glass.	1684	7th July 1863	Eliezer Edwards.
Improvements in treating ores and other substances containing iron, in the manufacture of iron, steel and alloys of iron, and of a purifying and deoxidizing agent therefrom, also in the construction of retorts or kilns for treating the said ores and substances.	1728	10th July 1863	William Henderson.
Means of and apparatus for heating, melting, boiling, evaporating and other useful purposes. (*Heating ovens.*)	1824	21st July 1863	Charles Stewart Duncan.
Ovens - - - - - - - (*Communicated by Jacques Blondel.*)	1942	6th Aug. 1863	William Clark.
Coke ovens - - - - - (*Communicated by Charles Claude Philibert Nicolas Pernolet.*)	1954	7th Aug. 1863	Richard Archibald Brooman.
Limekilns - - - - - -	2048	18th Aug. 1863	Henry Robinson.
Construction of retorts or ovens for extracting oil from certain descriptions of cannel coal or other bituminous substances.	2080	21st Aug. 1863	Robert Griffiths.
Machinery for drawing or discharging coke ovens and loading coke waggons.	2092	24th Aug. 1863	Alfred Jobson.
An improved method of and apparatus for consuming smoke and heating and warming public and other buildings, and for drying purposes generally. (*Applicable to kilns.*)	2266	16th Sept. 1863	Gabriel Lewal.
A new or improved combined coke oven and hot blast oven or apparatus.	2277	17th Sept. 1863	James M'Ewen.
Ovens - - - - - - -	2693	30th Oct. 1863	Henry Clow.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee
OVENS, &c.—*continued.*			
Improvements in malt and hop kilns, which improvements are partly applicable to the ventilation and warming of buildings, and to the drying of various substances.	3124	11th Dec. 1863	Alexander Epps.
Improvements in the arrangement of furnaces, flues, and kilns for drying and burning bricks, tiles and other articles, and in the application of the heat from the kilns to boilers for generating steam.	3266	24th Dec. 1863	James Duckett.
Kilns for calcining ironstone and limestone -	3273	28th Dec. 1863	John Gjers.
OXIDATION AND INCRUSTATION (*Preventing and removing.*)			
Improved compositions for preventing incrustation and corrosion in steam-boilers and condensers -	106	13th Jan. 1863	Charles Henry Townsend. James Young.
Improvements in covering wire and other iron articles for the purpose of protecting them from oxidation, and in the mode or method employed therein.	163	19th Jan. 1863	William Henry Harrison
Improvements in the condensation of steam and in apparatus for the same. (*Communicated by Amédée Mathurin Gabriel Sébillot.*)	274	29th Jan. 1863	William Clark.
Mode of uniting metallic surfaces - - - (*Communicated by William Brainerd Barnard.*)	313	4th Feb. 1863	George Haseltine.
Improvements in protecting and preserving the bottoms and sides of ships and other submerged surfaces from oxidation or fouling by incrustation, the attachment of barnacles, the action of animalculæ, or from any other like causes of injury.	641	6th March 1863	Henry Revell Spicer.
Steam-boilers and engines - - - -	652	9th March 1863	William Inglis.
Construction of steam-boilers - - - (*Preventing furrowing.*)	736	19th March 1863	Henry Wylde.
Improvements in protecting the surface of the iron and steel of ships and all other structures, except that of cables, tanks and boilers, while in contact with water, from decay, in preventing or abating and in facilitating the removal of fouliness of ships' bottoms, and in giving a capacity of increased speed to ships.	776	25th March 1863	John White.
An improved process for coating iron - - (*Communicated by James Mitchell.*)	841	1st April 1863	William Mitchell.
Preventing incrustation in steam-engine boilers -	896	9th April 1863	George Spencer.
Preventing incrustation in steam-boilers - -	957	16th April 1863	Charles Ferrett.
Improvements in treating and preparing iron, copper and other wires for telegraphic and other uses, for the purpose of preserving them from corrosion or decay.	963	17th April 1863	Richard Knight.
A new compound to be used as a lubricator -	1029	24th April 1863	Robert Lavender.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
OXIDATION, &c.—*continued.*			
An improved apparatus for preventing incrustation in steam-boilers	2913	20th Nov. 1863	James Seward. Henry Smith.
Compounds or compositions for coating or covering iron or wooden ships and vessels, metallic sheathing, telegraph cables and other objects, to preserve them from decay, fouling or other destructive action	3012	1st Dec. 1863	Jesse Gustavus Redman. George Martin.
Preventing the incrustation of steam-boilers and removing incrustation therefrom when formed.	3076	7th Dec. 1863	William Charles Page.
Lawn mowing and grass cutting machines (*Preventing corrosion.*) (*Partly communicated by Henry Fisher.*)	3092	8th Dec. 1863	James Edward Boyd.
Certain improvements in apparatus for removing the sediment and scum from the interior of steam-boilers.	3248	23rd Dec. 1863	John Knowles.
PAINTING, COLOURING AND VARNISHING; PAINTS, COLOURS, VARNISHES, GLAZES AND LACQUER.			
Coloring, bronzing and preserving iron and steel (*Communicated by Claude Joseph Thirault.*)	171	20th Jan. 1863	Henri Adrien Bonneville.
Improved preparations or compositions for coating and colouring the walls, ceilings and other parts of buildings.	293	2nd Feb. 1863	Edwin Hope Massey.
Improvements in the application of gas for the preparation of wood work generally and iron ships, for their better preservation and reception of paint or other protecting coating, and for disinfecting ships, hospitals and other places. (*Communicated by Henri de Lapparent.*)	348	7th Feb. 1863	William Clark.
Improvements in the treatment of steatite and in its application to certain purposes (*Substitute for white lead.*)	450	18th Feb. 1863	John Gray. Joseph Hudson.
Treatment of colouring matters derived from tar, for the purpose of making them applicable for painting. (*Communicated by Barthelemy Dupuy and Antoine Vibert.*)	475	21st Feb. 1863	Edward Thomas Hughes.
Manufacture of buttons	526	25th Feb. 1863	John Edwards.
An improved machine for making spiral lighters or spills from wood or other substance, and which machine will make and colour them when desired at one process or operation.	537	26th Feb. 1863	Charles Ritchie.
Furnaces and apparatus for manufacturing oxide of zinc or zinc white. (*Communicated by Heinrich Felsch.*)	546	26th Feb. 1863	James Humby.
Preparation of stone, plaster, compo, iron, wood and such like substances, so as to preserve them from decay. (*Or grounds for fresco painting.*)	1015	24th April 1863	John Benjamin Daines.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PAINTING, &c.—*continued.*			
Manufacture of sheets, slabs and other articles when fibrous materials are employed. (*For fresco panelling.*)	1158	8th May 1863	Charles Frederick Bielefeld.
Brushes, instruments or apparatus employed for painting the centres and bulls-eyes of military or other targets.	1221	15th May 1863	Douglas Monro Fyfe.
Manufacture of varnishes - - - -	1264	20th May 1863	Paul Addington.
Mode of producing ornamental surfaces applicable to the general purposes of decoration.	1335	28th May 1863	Francis Robert Piltz.
Means or method of producing black coloring matters or pigments.	1354	29th May 1863	William Green.
Improvements in indurating iron and in protecting iron and steel from oxidation.	1456	11th June 1863	James Webster.
Manufacture of bricks, quarries, slabs, tiles, earthenware pipes and other earthenware or ceramic articles. (*Glazing.*)	1492	15th June 1863	John Forrester.
Plastering, colouring and decoration of walls and ceilings.	1521	17th June 1863	Thomas Purdie.
An improved oil more especially designed for mixing paints and colors, and new mode of manufacturing the same. (*Communicated by Adolph Millochau.*)	1546	20th June 1863	George Hasletine.
Improvements in treating oil from shale or other bituminous minerals, and similar oils, to obtain various products therefrom, and in apparatus therefor. (*Residue for making black paint.*)	1564	22nd June 1863	John M'Lean.
Certain compositions for protecting metals and metallic articles from oxidation, and for coating slate, bricks, pottery and ceramic ware. (*And colouring.*) (*Communicated by Camille Baroness de Lavenant.*)	1646	2nd July 1863	Richard Archibald Brooman.
Coating or preserving iron ships or vessels or iron used for other purposes. (*Substitute for paint.*)	1650	2nd July 1863	Frederick Ransome.
Mode of preserving and protecting the silvering of mirrors. (*Communicated by Diodor Briansky.*)	1721	10th July 1863	Marc Antoine François Mennons.
An improved varnish for preserving metal and wood. (*Communicated by Messieurs Chaumont and Company.*)	1799	17th July 1863	Richard Archibald Brooman.
Treatment and utilization of certain of the waste products from the manufacture of alkali and bleaching powder, and also from certain smelting operations. (*Converting into pigments.*)	1860	25th July 1863	Charles Crockford.
An improved composition for coating or painting the bottoms of ships or vessels to prevent them from fouling.	1947	6th Aug. 1863	Thomas Simmelkiar. John Ibbetson Spicer.
Improved solutions to be used in the manufacture of paints and the preservation of wood, stone and metallic surfaces, and in the preservation and waterproofing of fibrous materials generally. (*Communicated by Richard Eaton.*)	2065	20th Aug. 1863	George Spencer.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee
OVENS, &c.—*continued.*			
Improvements in malt and hop kilns, which improvements are partly applicable to the ventilation and warming of buildings, and to the drying of various substances.	3124	11th Dec. 1863	Alexander Epps.
Improvements in the arrangement of furnaces, flues, and kilns for drying and burning bricks, tiles and other articles, and in the application of the heat from the kilns to boilers for generating steam.	3266	24th Dec. 1863	James Duckett.
Kilns for calcining ironstone and limestone -	3273	28th Dec. 1863	John Gjers.
OXIDATION AND INCRUSTATION (*Preventing and removing.*)			
Improved compositions for preventing incrustation and corrosion in steam-boilers and condensers -	106	13th Jan. 1863	Charles Henry Townsend. James Young.
Improvements in covering wire and other iron articles for the purpose of protecting them from oxidation, and in the mode or method employed therein.	163	19th Jan. 1863	William Henry Harrison
Improvements in the condensation of steam and in apparatus for the same. (*Communicated by Amédée Mathurin Gabriel Sébillot.*)	274	29th Jan. 1863	William Clark.
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Steam-boilers and engines - - - -	652	9th March 1863	William Inglis.
Construction of steam-boilers - - - (*Preventing furrowing.*)	736	19th March 1863	Henry Wylde.
Improvements in protecting the surface of the iron and steel of ships and all other structures, except that of cables, tanks and boilers, while in contact with water, from decay, in preventing or abating and in facilitating the removal of foulness of ships' bottoms, and in giving a capacity of increased speed to ships.	776	25th March 1863	John White.
An improved process for coating iron - - (*Communicated by James Mitchell.*)	841	1st April 1863	William Mitchell.
Preventing incrustation in steam-engine boilers -	896	9th April 1863	George Spencer.
Preventing incrustation in steam-boilers - -	957	16th April 1863	Charles Ferrett.
Improvements in treating and preparing iron, copper and other wires for telegraphic and other uses, for the purpose of preserving them from corrosion or decay.	963	17th April 1863	Richard Knight.
A new compound to be used as a lubricator -	1020	24th April 1863	Robert Lavender.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
OXIDATION, &c.—*continued.*			
Coating wrought or other iron to protect it from corrosion or oxydation. (*Communicated by George Washington Holley.*)	1156	8th May 1863	William Clark.
Improvements in preventing the fouling of the bottoms and sides of ships and vessels, particularly applicable to ships and vessels constructed of or sheathed with iron.	1232	16th May 1863	Frederick Maun Burns.
An improved method of preventing incrustation of earthy matters in steam-boilers, steam generators and fuel economizers.	1384	3rd June 1863	John Travis.
Improvements in indurating iron and in protecting iron and steel from oxidation.	1456	11th June 1863	James Webster.
Gas regulators - - - - -	1477	12th June 1863	John Jones.
An improved means for the protection and preservation of lead surfaces exposed to the action of water, and for the protection of such surfaces from decomposition by atmospheric action. (*Communicated by Professor Dr. Henry Schwarz.*)	1519	17th June 1863	Fédor de Wyldé.
Certain compositions for protecting metals and metallic articles from oxidation, and for coating slate, bricks, pottery, and ceramic ware. (*Communicated by Camille Baroness de Lavenant.*)	1646	2nd July 1863	Richard Archibald Brooman.
Coating or preserving iron ships or vessels or iron used for other purposes.	1650	2nd July 1863	Frederick Ransome.
An improved mode of preventing and removing the incrustations in marine and land steam-boilers.	1804	18th July 1863	William Charles Page.
Coating or protecting metallic surfaces - - (*Preventing oxidation.*)	1882	29th July 1863	Edwin Sturge.
Steam-boilers - - - - - (*Preventing incrustation.*)	2188	5th Sept. 1863	George Hargreaves.
Means of protecting and preserving the hulls and bottoms of ships and vessels from fouling and corrosion.	2295	18th Sept. 1863	Isham Baggs.
An improved plastic composition applicable to the coating of metallic and other surfaces. (*Protecting from oxidation.*)	2371	26th Sept. 1863	James Spence.
Cast-iron pit tubbing - - - - (*Protecting from corrosion.*)	2459	7th Oct. 1863	John Gibson.
Improvements in sheathing for navigable vessels of iron or wood, which sheathing is also applicable to the covering of roofs, walls and other purposes.	2478	9th Oct. 1863	John M'Innes.
Improvements in taps or cocks, part of which improvements is applicable to the lubrication and protection of the journals of revolving shafts, axles or spindles.	2492	12th Oct. 1863	Alexander Inglis.
Certain compositions for preserving iron ships and other submerged iron work from corrosion and from fouling.	2641	26th Oct. 1863	Marius Vian.
Improvements in the construction of iron and other ships, vessels and batteries of war, and of cupolas and armour plates applicable thereto, parts of which improvements are also applicable to other useful purposes. (*Preventing corrosion.*)	2690	30th Oct. 1863	Barnabas Russ.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
OXIDATION, &c.—*continued.*			
An improved apparatus for preventing incrustation in steam-boilers	2913	20th Nov. 1863	James Seward. Henry Smith.
Compounds or compositions for coating or covering iron or wooden ships and vessels, metallic sheathing, telegraph cables and other objects, to preserve them from decay, fouling or other destructive action	3012	1st Dec. 1863	Jesse Gustavus Redman. George Martin.
Preventing the incrustation of steam-boilers and removing incrustation therefrom when formed.	3076	7th Dec. 1863	William Charles Page.
Lawn mowing and grass cutting machines (*Preventing corrosion.*) (*Partly communicated by Henry Fisher.*)	3092	8th Dec. 1863	James Edward Boyd.
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Improved preparations or compositions for coating and colouring the walls, ceilings and other parts of buildings.	293	2nd Feb. 1863	Edwin Hope Massey.
Improvements in the application of gas for the preparation of wood work generally and iron ships, for their better preservation and reception of paint or other protecting coating, and for disinfecting ships, hospitals and other places. (*Communicated by Henri de Lapparent.*)	348	7th Feb. 1863	William Clark.
Improvements in the treatment of steatite and in its application to certain purposes (*Substitute for white lead.*)	450	18th Feb. 1863	John Gray. Joseph Hudson.
Treatment of colouring matters derived from tar, for the purpose of making them applicable for painting. (*Communicated by Barthelemy Dupuy and Antoine Vibert.*)	475	21st Feb. 1863	Edward Thomas Hughes.
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PAINTING, &c.—*continued.*			
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Brushes, instruments or apparatus employed for painting the centres and bulls-eyes of military or other targets.	1221	15th May 1863	Douglas Monro Fyfe.
Manufacture of varnishes - - - -	1264	20th May 1863	Paul Addington.
Mode of producing ornamental surfaces applicable to the general purposes of decoration.	1335	28th May 1863	Francis Robert Piltz.
Means or method of producing black coloring matters or pigments.	1354	29th May 1863	William Green.
Improvements in indurating iron and in protecting iron and steel from oxidation.	1456	11th June 1863	James Webster.
Manufacture of bricks, quarries, slabs, tiles, earthenware pipes and other earthenware or ceramic articles. (*Glazing.*)	1492	15th June 1863	John Forrester.
Plastering, colouring and decoration of walls and ceilings.	1521	17th June 1863	Thomas Purdie.
An improved oil more especially designed for mixing paints and colors, and new mode of manufacturing the same. (*Communicated by Adolph Millochau.*)	1546	20th June 1863	George Hasletine.
Improvements in treating oil from shale or other bituminous minerals, and similar oils, to obtain various products therefrom, and in apparatus therefor. (*Residue for making black paint.*)	1564	22nd June 1863	John M'Lean.
Certain compositions for protecting metals and metallic articles from oxidation, and for coating slate, bricks, pottery and ceramic ware. (*And colouring.*) (*Communicated by Camille Baroness de Lavenant.*)	1646	2nd July 1863	Richard Archibald Brooman.
Coating or preserving iron ships or vessels or iron used for other purposes. (*Substitute for paint.*)	1650	2nd July 1863	Frederick Ransome.
Mode of preserving and protecting the silvering of mirrors. (*Communicated by Diodor Briansky.*)	1721	10th July 1863	Marc Antoine François Mennons.
An improved varnish for preserving metal and wood. (*Communicated by Messieurs Chaumont and Company.*)	1799	17th July 1863	Richard Archibald Brooman.
Treatment and utilization of certain of the waste products from the manufacture of alkali and bleaching powder, and also from certain smelting operations. (*Converting into pigments.*)	1860	25th July 1863	Charles Crockford.
An improved composition for coating or painting the bottoms of ships or vessels to prevent them from fouling.	1947	6th Aug. 1863	Thomas Simmelkiar. John Ibbetson Spicer.
Improved solutions to be used in the manufacture of paints and the preservation of wood, stone and metallic surfaces, and in the preservation and waterproofing of fibrous materials generally. (*Communicated by Richard Eaton.*)	2065	20th Aug. 1863	George Spencer.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PAINTING, &c.—*continued.*			
Improvements in the construction of floating docks and pontoons, and the means of cleaning, painting or repairing them.	2196	5th Sept. 1863	George Banks Rennie.
Improved apparatus for cleaning and painting or coating the bottoms of ships and other structures.	2292	18th Sept. 1863	Robert Doyne Dwyer.
Utilizing the waste flux from galvanizing works - (*Forming paint.*)	2356	24th Sept. 1863	James Webster.
Improvements applicable to metallic casks and in machinery for the manufacture of the same. (*Painting.*)	2498	12th Oct. 1863	Thomas Browning.
Improvements in the manufacture of the prisms, lenses and glasses of stereoscopes, and in ornamenting glass.	2618	23rd Oct. 1863	Victor Julien Cassaignes.
Preparing cements and varnishes - - -	2629	24th Oct. 1863	James Brown. John Thomas Way. Thomas Mullett Evans.
Ornamenting glass and sheet gelatine - -	2670	28th Oct. 1863	William Nall.
Manufacture of zinc white - - - (*Communicated by Alphonse Pallu.*)	2721	3rd Nov. 1863	Michael Henry.
Manufacture of starches by the introduction of coloring matters - - - -	2839	14th Nov. 1863	James Medway. Samuel Joyce.
Compounds or compositions for coating or covering iron or wooden ships and vessels, metallic sheathing, telegraph cables and other objects, to preserve them from decay, fouling or other destructive action - - - - (*Metallic varnish.*)	3012	1st Dec. 1863	Jesse Gustavus Redman. George Martin.
Machinery for grounding or colouring wall paper and other fabrics. (*Communicated by Richard M'Namee.*)	3133	11th Dec. 1863	Richard Archibald Brooman.
Improved apparatus for painting venetian blinds -	3172	16th Dec. 1863	John Miller Bryden.
An improved oil more especially designed for mixing paints and colors, and a new mode of manufacturing the same. (*Communicated by Adolph Millochau.*)	3207	19th Dec. 1863	George Haseltine.
PAPER, PASTEBOARD, AND PAPIER-MÂCHÉ; PAPER-HANGINGS.			
I.—Making Paper, Papier-mâché, Preparing Pulp, &c.			
Improvements in the method of and apparatus for preparing materials for the manufacture of paper and similar purposes, part of the invention being also applicable to other operations in which materials are subjected to the action of hot agents.	1	1st Jan. 1863	Robert Hanham Collyer, M.D., F.C.S.
Manufacture of paper - - - -	27	3rd Jan. 1863	William Astrop.
Manufacture of pulp for paper making and similar purposes.	90	10th Jan. 1863	Ferrar Fenton.
Machinery for the manufacture of paper - -	110	13th Jan. 1863	Charles Edwards Amos.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PAPER, &c.—*continued.*			
Machinery and process for reducing wood to a fibrous condition, for the manufacture of paper stuff or pulp.	188	21st Jan. 1863	Carl Heinrich Roeckner.
Manufacture of paper - - -	297	2nd Feb. 1863	Richard Hastings Frith.
Manufacture of paper - - - -	371	11th Feb. 1863	John Duckworth.
Improvements in the method of and apparatus for separating the fibres of straw, wood and other vegetable substances, and extracting the gummy and coloring matters therefrom, to render them fit for paper stock or for other purposes. (*Communicated by Azel Storrs Lyman.*)	408	14th Feb. 1863	William Clark.
Improvements in press papers and in the method or means of drying them and other similar sheets of paper, applicable also for the drying of woven fabrics, yarns, wool, cotton or other fibrous substances.	415	16th Feb. 1863	James William Crossley.
An improvement in boilers for disintegrating and pulping vegetable substances. (*Communicated by William Fittock Ladd and Samuel Armstrong Walsh.*)	467	20th Feb. 1863	William Clark.
Manufacture of paper - - -	523	25th Feb. 1863	John Barcham Green.
Improvements in preparing and obtaining photographic impressions, and in the application of such impressions. (*Preparing the paper.*) (*Communicated by Alphonse Louis Poitevin.*)	586	2nd March 1863	William Clark.
Bleaching jute fibre - - - - (*Or paper pulp.*)	780	25th March 1863	George Stuart.
Manufacture of labels for luggage and other articles. ("*Compound paper.*")	798	26th March 1863	William Blake.
Rag machines - - - - -	806	27th March 1863	James Dixon Asquith. George Greenwood.
Improved machinery or apparatus for drying coal, grain and other substances. (*Paper pulp, &c.*)	857	4th April 1863	Prosper Hanres.
Machinery for the manufacture of paper and of the various kinds of boards produced from fibrous substances. (*Communicated by John Franklin Jones.*)	1064	28th April 1863	William Clark.
Communicating motion to machinery for manufacturing paper pulp.	1138	7th May 1863	James Park.
Manufacture of paper stuff or pulp from certain vegetable substances. (*Communicated by Lucien Bardoux.*)	1163	9th May 1863	William Edward Gedge.
An improved dryer fabric for paper making -	1167	9th May 1863	William Boaler.
Papermaker's rag or pulp engines - - -	1206	13th May 1863	Benjamin Lambert.
Treating flax, hemp and other vegetable fibrous substances, in order to bleach and separate the fibres.	1403	5th June 1863	Thomas Gray.
A new material or compound applicable to the manufacture of pipes or tubes, to caulking or covering ships' bottoms, and to other useful purposes. (*Substitute for papier mâché.*)	1550	20th June 1863	Charles Peterson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PAPER, &c.—*continued.*			
Treatment of broom for the manufacture of paper pulp. (*Communicated by Louis Alexandre Joseph Deplanque.*)	1559	20th June 1863	William Clark.
Manufacture of paper applicable for hemorrhoidal complaints.	1587	23rd June 1863	Franz Feichtinger.
Treatment and preparation of materials for the manufacture of paper.	1652	3rd July 1863	Charles Martin.
Preparation of waste paper in order to its being again used in the manufacture of paper.	1789	16th July 1863	Benjamin Lambert.
Machinery and process for reducing wood to a fibrous condition for the manufacture of paper stuff or pulp.	1821	21st July 1863	Carl Heinrich Roeckner.
Hydraulic apparatus - - - - (*Used in paper making.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Improvements in the manufacture of wadding, paper and felted fabrics, and in the preparation of vegetable fibres to be used in such manufactures.	2164	1st Sept. 1863	George Whiffen Ewens.
Improvements in the preparation of materials for the manufacture of paper, and in the construction of machinery employed for such purposes.	2189	5th Sept. 1863	Samuel Millbourn.
Paper-making machinery - - - -	2194	5th Sept. 1863	Richard Batt.
Means of utilizing refuse azoted matters of commerce for the manufacture of various chemical products. (*Recovering fibres for paper making.*) (*Communicated by Amédée Gélis and Lucien Dusart.*)	2222	9th Sept. 1863	William Clark.
Improvements in glazing and rolling press papers, pasteboard and other paper requiring to be glazed or rolled, and in the means or apparatus employed therein.	2232	10th Sept. 1863	Holmes Wright. John William Wright. William Clough.
An improved method of uniting belts and lengths of wire gauze and other metal cloth. (*For paper-making machines.*)	2249	12th Sept. 1863	Ebenezer Noah Gregory.
Improvements in drying paper, pasteboard and similar fabrics, and in the machinery, apparatus or means employed therein.	2287	17th Sept. 1863	Peter McLaurin.
Manufacture of paper - - - -	2418	2nd Oct. 1863	John James Lundy. Robert Irvine.
An improved application of certain schistous or shaly materials to the manufacture and finishing of paper.	2509	13th Oct. 1863	Joseph Place.
Boiling rags and other paper-making materials -	2520	14th Oct. 1863	William Jackson Rideout.
Improvements in treating ligneous substances, in separating and recovering the fibrous portions therefrom, in preparing, bleaching and sizing the same, and in machinery employed therein. (*Communicated by Pierre Celestin Victor Baud and Theodore Casimir Delamarre.*)	2587	21st Oct. 1863	Richard Archibald Brooman.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PAPER, &c.—*continued.*			
Reducing and preparing wood for the manufacture of paper and pulp.	2606	22nd Oct. 1863	William Wharton Burdon.
Apparatus for feeding sheets of sized or unsized paper to a drying machine.	2694	30th Oct. 1863	George Frederick Busbridge.
Improvements in the making of safety paper and in the machinery or apparatus employed therein.	2700	31st Oct. 1863	William Tasker the younger.
Improved arrangements of paper-making machinery	2767	7th Nov. 1863	Richard Batt.
Treatment of vegetable fibres for the production of paper pulp or half stuff therefrom.	2931	21st Nov. 1863	Ferrar Fenton.
Improvements in machinery for amalgamating or intermixing dry, semi-fluid or aqueous materials, and for agitating solids with liquids, for combining, dissolving or washing the same. (*Washing rags for paper-makers.*)	2947	23rd Nov. 1863	Thomas Carr.
Manufacture of paper, thread, cordage and fabrics from beetroot.	2967	25th Nov. 1863	Louis Accarain.
A new method of discharging color from rags used for paper making or other purposes, and in treating of vegetable fibres by such process.	2980	27th Nov. 1863	Thomas Gray.
An improved rag machine cylinder or swift and tooth of an improved principle, for the purpose of pulling up woollen and cotton rags, silk rags, hair bagging, and for cleaning and opening wools and waste, and for the pulling up of fibrous substances in the rag - - - - (*See* "SPINNING.")	3113	10th Dec. 1863	Alexander Reid. George Rydill.
Improvements in utilizing the waste liquors resulting from the preparation of fibrous matters in paper pulp making, and in the machinery or apparatus to be used therein. - -	3168	15th Dec. 1863	Henry Chadwick. John Clench.
Manufacture of paper from a material not hitherto used for that purpose. (*Communicated by Matthew Carter.*)	3169	15th Dec. 1863	Axel Stärck.
Improvements in the knives used for the cylinders and blocks of rag cutting or beating engines, the same arrangement of knives being also applicable to the crushing or beating of other substances. (*Communicated by F. Meyer.*)	3238	22nd Dec. 1863	William Edward Gedge.
Improvements in and apparatus for the conversion of ropes and other cordage into oakum, tow and paper stuff, parts of which are applicable to teasing and cleaning wool or hair on skins, and dressing "waste" tow, wool, hair and other "waste" fibres.	3246	23rd Dec. 1863	James Ronald.
II.—Cutting, Folding and Ornamenting Paper and Pâpier-maché.			
Manufacture of insulators for electric telegraphs - (*Cells of papier-mâché.*)	160	19th Jan. 1863	Sir William O'Shaughnessy Brooke.
Machinery or apparatus for folding paper and other fabrics or materials.	532	25th Feb. 1863	James Inglis.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PAPER, &c.—*continued.*			
Ornamentation of papier-mâché or other japanned wares, wood, ivory or other similar materials.	1145	7th May 1863	John Bettridge.
Envelope folding machines - - -	1245	18th May 1863	Rest Fenner. William Henry Hight.
Mode of producing ornamental surfaces applicable to the general purposes of decoration. (*Oil paper.*)	1335	28th May 1863	Francis Robert Piltz.
An improved method or process for obtaining patterns and designs for the arts and manufactures. (*Ornamenting paper.*) (*Communicated by Thomas James Hussey.*)	1566	22nd June 1863	Francis Boult.
An improved construction of rolling press - - (*For glazing paper.*)	1729	10th July 1863	John Peter Bourquin.
An improved process for making paper transparent and transferring designs. (*Communicated by Henry Loewenberg and Henry Schoonmaker.*)	1771	15th July 1863	William Clark.
Manufacture of hollow cutting tools - - (*For cutting out paper.*)	1808	20th July 1863	William Simpson. John Hutton.
Perforating machines - - - (*For paper.*)	2496	12th Oct. 1863	John Heap.
Improvements in shears for cutting metals and other substances. (*Cardboard.*) (*Communicated by Hughes François Aubert.*)	2501	12th Oct. 1863	William Edward Gedge.
Manufacture of paper spool tubes - -	2983	27th Nov. 1863	Charles Crabtree.
XXI.—Paper-hangings.			
Improvements in producing imitation gilding on paper-hangings and other surfaces, also in metal leaf and metallic or bronze powder suitable for the purpose.	495	23rd Feb. 1863	John Erwood.
Improvements in cloth blankets and other fabrics to be used in machinery for printing fabrics, paper-hangings, and letter press. (*Communicated by Achille Clément.*)	578	2nd March 1863	Frederick Tolhausen.
Certain improvements in the method of producing surfaces in imitation of woods, and in printing therefrom.	779	25th March 1863	Joseph Hardman Worrall.
Manufacture of paper-hangings - - -	2025	15th Aug. 1863	Robert Smith. Jabez Booth.
Machinery for grounding or colouring wall paper and other fabrics. (*Communicated by Richard M'Namee.*)	3133	11th Dec. 1863	Richard Archibald Brooman.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PAVING, ROAD-MAKING AND CLEANSING, PAVEMENTS.			
Manufacture of artificial stone - - - (*For paving and macadamising.*) (*Communicated by Joseph Sepulchre.*)	157	19th Jan. 1863	Ephraim Sabel.
Wood paving - - - - - -	309	4th Feb. 1863	George Harton.
Pavements for roads, streets or ways - - -	373	11th Feb. 1863	Charles Pemberton Carter.
Improvements in pavements and floors, which improvements are applicable also to stairs and steps.	374	11th Feb. 1863	Robert Saunders.
Making and constructing of carriage ways -	1003	22nd April 1863	Edward James Jeffs. Thomas Turner.
Bricks suitable for being used for paving stables and other places.	1375	2nd June 1863	George Hallen Cottam.
Gravelling and macadamizing roads and paths.	1504	16th June 1863	Roderick Grogan.
A new material or compound applicable to the manufacture of pipes or tubes, to caulking or covering ships' bottoms, and to other useful purposes. (*For paving.*)	1550	20th June 1863	Charles Peterson.
A new application of rolled metal plates to the formation of railways, bridges, tramways and other structures.	1937	6th Aug. 1863	Joseph Emerson Dowson.
Road sweeping machines - - - - (*Communicated by Jean Baptiste Tailfer.*)	1982	11th Aug. 1863	William Clark.
An improved method of making and inlaying encaustic tiles or other plastic articles and substances - - - - - -	2176	3rd Sept. 1863	William Boulton. Joseph Worthington.
Paving roads or ways - - - - (*Communicated by Louis Victor Fortin.*)	2219	9th Sept. 1863	William Edward Gedge.
An improved plastic composition applicable to the coating of metallic and other surfaces. (*For pavement.*)	2371	26th Sept. 1863	James Spence.
Improved apparatus for boring and cleaving stone (*For paving.*)	2531	16th Oct. 1863	James Polglase. Jonathan Cox.
Preparing cements and varnishes - - (*For making pavements.*)	2629	24th Oct. 1863	James Brown. John Thomas Way. Thomas Mullett Evans.
Improvements in the construction of iron and other ships, vessels and batteries of war, and of cupolas and armour plates applicable thereto, parts of which improvements are also applicable to other useful purposes. (*Frames filled with concrete for roads.*)	2690	30th Oct. 1863	Barnabas Russ.
Machinery for excavating land, making cuttings and other earthworks. (*For roads.*)	2710	2nd Nov. 1863	Florent Joseph Vandenvinne.
Improvements in cleaning roadways and in the machinery or apparatus employed therein. (*Communicated by Thomas Agudio.*)	3188	17th Dec. 1863	John Henry Johnson.
Improvements in the manufacture of floor cloths and coverings and similar fabrics, and in pavements.	3210	19th Dec. 1863	Frederick Walton.
Improvements in machinery or apparatus for rolling roads, which is also applicable to traction engines and other similar purposes - -	3216	21st Dec. 1863	William Clark. William Fothergill Batho.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PEAT.			
Improvements in the construction and mode of working apparatus to be employed in pressing, moulding, shaping, embossing, crushing, shearing and cutting metallic and other substances. (*Moulding peat.*)	37	5th Jan. 1863	Henry Bessemer.
Manufacture of paper - - - - (*From peat or turf bog.*)	297	2nd Feb. 1863	Richard Hastings Frith.
Improvements in machinery for digging, compressing and moulding peat or turf, and for retorts and kilns for drying peat or turf and making peat or turf charcoal, through the agency of hydro-caloric or superheated steam, and for collecting the products of distillation whilst charring the peat or turf.	528	25th Feb. 1863	Thomas Vincent Lee.
Machinery for pressing peat - - - (*Communicated by Christian Augustus Erich.*)	597	3rd March 1863	Theodor Erich.
Moulding machines - - - - (*Peat.*)	915	11th April 1863	Frederick Veramann.
Improvements in the preparation or treatment of peat or turf and the manufacture thereof into charcoal and other fuel, drain pipes, building and other tiles, and in apparatus used therein.	1255	19th May 1863	John Kelly.
Improvements in cutting and transplanting turf, and in apparatus to be employed therein, which apparatus is also applicable to the extraction of weeds and to the planting of seeds, roots, sets or plants.	1370	1st June 1863	Charles Belcher.
Treatment of peat and other substances containing moisture.	1410	8th June 1863	Charles Edward Newcomen.
The manufacture of a new product from peat and peat tar. (*See* "CHARCOAL.") (*Communicated by Edmund Hess.*)	1784	16th July 1863	Louis Rudolph Bodmer.
Machinery for pressing peat - - - (*Communicated by Christian Augustus Erich.*)	2163	1st Sept. 1863	Theodor Erich.
Improvements in apparatus for the distillation of coal and peat, and such other substances as are or may be used for the manufacture of solid and liquid volatile hydro-carbons, or for the manufacture of the said hydro-carbons and coke.	2886	18th Nov. 1863	William Mattie Williams.
PENS, PENHOLDERS, PENCILS, AND PENCIL-CASES.			
An improved lead and stone pencil sharpener -	333	6th Feb. 1863	Thomas Blakeley. Benjamin Meakes.
Manufacture of metallic pens - - -	455	19th Feb. 1863	Robert Pinkney.
An improvement or improvements in metallic pens	562	28th Feb. 1863	Benjamin West.
Apparatus for protecting the points of pencils -	599	3rd March 1863	Barnet Solomon Cohen.
An improvement or improvements in metallic pens	682	13th March 1863	Charles Thomas Lutwyche. Alfred Lutwyche.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PENS, &c.—*continued.*			
An improvement or improvements in the manufacture of pens	1165	9th May 1863	Joseph Page. Alfred Thomas Wayne.
Means or method of producing black coloring matters or pigments. (*Or crayons.*)	1354	29th May 1863	William Green.
Pen and ink holders	2054	18th Aug. 1863	Jean Baptiste Vincent Faure.
An improved construction of fountain pen	2227	9th Sept. 1863	Jacob Maggs.
An improved penholder and feeder (*Communicated by Jean Marie Laurent.*)	2417	2nd Oct. 1863	William Edward Gedge.
Improvements in pencil-cases and holders for crayons and other marking, writing or drawing materials, and in boxes for holding leads for pencils, crayons and other articles.	3071	7th Dec. 1863	Michael Turnor.
PETTICOATS, SKIRTS, STAYS, CRINOLINES, RUFFLES, COLLARS AND OTHER LIKE ARTICLES OF LADIES' ATTIRE; FANS.			
Certain improvements in treating or covering strip steel or other suitable material for the making of crinoline skirts and other similar purposes for which the same may be applicable, and which same treatment or covering may be used for trimming or strengthening certain parts of ladies' dresses	29	3rd Jan. 1863	William Tolson. Charles Brown.
Covering wire, crinoline steel, or hoops for skirts	54	7th Jan. 1863	Thomas Frederick Cashin.
Improvements in machinery for plaiting cotton thread or other fibrous material over steels for crinolines, and in the mode of securing the plaiting to prevent it slipping thereon.	161	19th Jan. 1863	Henry Rushton.
Articles of dress known as collars, cuffs, wristbands, shirt fronts, habit shirts and petticoats.	212	23rd Jan. 1863	Percy Addison Cole.
Petticoats or crinolines (*Communicated by Charles Edmond François Couturier.*)	231	26th Jan. 1863	Richard Archibald Brooman.
An improved covering for hooped skirts	349	7th Feb. 1863	Joshua James.
An improved cover or protection for steel and other metal springs, ribbands and hoops. (*Crinoline.*) (*Communicated by Eugene Lange.*)	420	16th Feb. 1863	Richard Archibald Brooman.
A new application and combination of materials to be employed in the manufacture of "skirtings."	566	28th Feb. 1863	Thomas Farra.
An improvement in waterproof compounds and in fabrics prepared therewith. (*For coating wire for crinoline.*)	968	21st April 1863	Edwin Lindsey Simpson.
An improved machine for unwinding crinoline steel	1045	27th April 1863	Samuel Osborne.
Improved means of joining or fastening together lace, blond, quilling or similar materials.	1110	4th May 1863	John Fortune.
A new fabric suitable for trimmings (*Communicated by Jacques Desprez and Georges Montaillé.*)	1120	5th May 1863	Richard Archibald Brooman.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PETTICOATS, &c.—*continued.*			
An improved binding to be used for trimming woollen cloth garments.	1312	25th May 1863	Gustav Köttgen.
Shirt collars and boys' and ladies' collars	1707	9th July 1863	Wellington Williams.
An improved advertising medium (*Collars and cuffs.*)	1837	22nd July 1863	Benjamin Beral Bertram.
Coating or protecting metallic surfaces (*Crinoline steel, stay busks, &c.*)	1882	29th July 1863	Edwin Sturge.
Certain improvements in coating or covering crinoline steel.	2046	18th Aug. 1863	John Briggs.
An improved fan	2058	19th Aug. 1863	Charles Sonnhammer.
An improved fastening for leggings, stays or other articles.	2062	19th Aug. 1863	Simon Sanderson.
A method of preparing mica and talc in order to render them applicable to articles of wearing-apparel, and to ornamental purposes. (*Hooped skirts.*)	2154	31st Aug. 1863	George Brooks Pettit.
Crinolines and crinoline fastenings	2168	2nd Sept. 1863	Elizabeth Collier.
Crinolines	2319	21st Sept. 1863	Edmond François Rattier.
Crinolines and hooped skirts	2368	26th Sept. 1863	William Tertius Rowlett.
A new application of material for covering crinolines, and in the manufacture of the said material.	2369	26th Sept. 1863	Richard Clarke.
An improved manufacture of bands or strips for crinolines.	2484	10th Oct. 1863	George Waide Reynolds.
Improvements in the manufacture of saddles and harness, and in materials for and in ornamenting the same, which improvements are applicable for parts of carriages, dress and coverings for the head, and other articles. (*Ladies' skirts.*)	2579	21st Oct. 1863	Thomas Charles Clarkson.
An improved clasp or fastening for gloves or other wearing-apparel, for umbrellas, travelling bags or other similar objects. (*For gowns, stays, &c.*)	2631	24th Oct. 1863	Louis Joseph Hannart.
Sewing-machines (*For forming frills or ruffles.*) (*Communicated by Richard Mott Wanzer.*)	2634	24th Oct. 1863	Benjamin Browne.
An improved apparatus for making fringes	2736	5th Nov. 1863	Jonathan Northrop.
Mode of marking patterns or designs upon gored and straight skirts and skirtings, to serve as a guide for sewing and embroidering thereon.	2972	26th Nov. 1863	John Thorpe.
Frames for umbrellas and other like articles, and petticoats or skirts.	2977	26th Nov. 1863	James Chesterman.
Crinoline or hooped skirts (*Communicated by Edme Ferdinand Evras.*)	3070	7th Dec. 1863	Richard Archibald Brooman.
An improved manufacture of elastic bands applicable to the production of ladies' skirts or "crinolines."	3077	7th Dec. 1863	Charles Brown.
Crinolines	3078	8th Dec. 1863	Jeannette Fleurman.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PETTICOATS, &c.—*continued.*			
A holder or suspender for holding cotton and other reels, spools, or balls, parts of which are also applicable for other useful purposes - - (*Skirt suspender.*)	3224	21st Dec. 1863	Edwin John Green. Richard Mason.
Paper or cloth lined paper collars for gentlemen and ladies.	3261	24th Dec. 1863	Solomon Sally Gray.
PHOTOGRAPHY AND PHOTOGRAPHIC APPARATUS.			
Preparing and obtaining photogenic pictures or representations. (*Communicated by Adolphe Teissonnière.*)	185	21st Jan. 1863	William Clark.
Means and apparatus for copying and reproducing sculpture and other objects of art. (*Communicated by François Willème.*)	256	28th Jan. 1863	William Clark.
Improvements in obtaining, transferring and printing from photographic pictures or images, also in preparing materials for the same.	267	29th Jan. 1863	John Pouncy.
Improved arrangements for obtaining pictorial back grounds, fore grounds and perspectives when taking photographic portraits or sun pictures.	286	31st Jan. 1863	Thomas Bennett.
Photographic apparatus - - - (*Communicated by Jean Jacques Leopold Rousseau de Lafarge.*)	376	11th Feb. 1863	Richard Archibald Brooman.
Apparatus for taking photographic impressions or likenesses by means of the camera.	478	21st Feb 1863	Albert Ceileur
Improvements in preparing and obtaining photographic impressions, and in the application of such impressions. (*Communicated by Alphonse Louis Poitevin.*)	586	2nd March 1863	William Clark.
An "All England's cricketer's" clasp - - (*With photographs inserted.*)	710	17th March 1863	John Henry Brierley. Barzillai Greenwood.
An album belt - - - (*With photographs inserted.*)	711	17th March 1863	John Henry Brierley. Barzillai Greenwood.
Means of obtaining publicity - - - (*Communicated by Louis Jean Delton.*)	1004	22nd April 1863	William Clark.
Stereoscopes - - - - -	1204	13th May 1863	Victor Julien Cassaignes.
Clips or holders for inserting and fixing photographic pictures in albums.	1434	9th June 1863	John Murray.
An improved method or process for obtaining patterns and designs for the arts and manufactures. (*Communicated by Thomas James Hussey.*)	1566	22nd June 1863	Francis Boult.
Improvements in photo-lithography, photo-zincography, and photographic engraving on copper or steel plates, or on any other suitable substances.	1588	23rd June 1863	William Toovey.
An improved construction of rolling press - - (*For photographers.*)	1729	10th July 1863	John Peter Bourquin.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PHOTOGRAPHY, &c.—*continued.*			
Means of keeping cameras or other apparatus steady when suspended to balloons.	2028	15th Aug. 1863	Johann Ernst Friedrich Lüdeke.
An improved mode of and apparatus for producing by the aid of photography optical illusions of moving animals and bodies - - -	2063	19th Aug. 1863	Gaetano Bonelli. Henry Cook.
A plate holder for the photographic camera adapted to carry different sized plates, each plate being on the same plane and in the same focus.	2083	22nd Aug. 1863	Thomas Pegram.
An improved method of and apparatus for inserting pictures in and withdrawing them from photographic albums.	2085	22nd Aug. 1863	Alfred Watson.
Apparatus for supporting photograph cameras -	2252	12th Sept. 1863	John Adams Whipple.
Mounting or setting transparent photographic pictures.	2354	24th Sept. 1863	William George Helsby.
Improvements in the manufacture of the prisms, lenses and glasses of stereoscopes, and in ornamenting glass.	2618	23rd Oct. 1863	Victor Julien Cassaignes.
Photography - - - - - (*Communicated by Mathieu Risler the younger.*)	2954	24th Nov. 1863	George Davies.
Jewel, photograph, instrument and other cases -	3187	17th Dec. 1863	Charles Jeffreys.
PICTURES, PICTURE-FRAMES; EXHIBITING VIEWS; PRODUCING OPTICAL ILLUSIONS AND DRAMATIC SCENERY.			
Preparing and obtaining photogenic pictures or representations. (*Communicated by Adolphe Teissonnière.*)	185	21st Jan. 1863	William Clark.
Improvements in obtaining, transferring and printing from photographic pictures or images, also in preparing materials for the same.	267	29th Jan. 1863	John Pouncy.
Improved arrangements for obtaining pictorial back grounds, fore grounds, and perspectives, when taking photographic portraits or sun pictures.	286	31st Jan. 1863	Thomas Bennett.
Apparatus to be used in the exhibition of dramatic and other like performances - - -	326	5th Feb. 1863	Henry Dircks. John Henry Pepper.
Apparatus for taking photographic impressions or likenesses by means of the camera.	478	21st Feb. 1863	Albert Ceileur.
Modes or means for framing pictures, looking glasses and other objects. (*Communicated by Antoine Auvray.*)	713	17th March 1863	William Edward Gedge.
An improved medicated oil for the preservation of metal, wood or stone. (*Or renovating paintings.*)	910	10th April 1863	Robert Smith.
Certain improvements in the mode of finishing clasps and other such like metallic connectors, and which said mode of finish is also applicable for other purposes. (*Cases for photographs.*)	1142	7th May 1863	Alfred Stanley.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PICTURES, &c.—*continued.*			
Clips or holders for inserting and fixing photographic pictures in albums.	1434	9th June 1863	John Murray.
A new material or compound applicable to the manufacture of pipes or tubes, to caulking or covering ships' bottoms, and to other useful purposes. (*For picture frames.*)	1550	20th June 1863	Charles Peterson.
Apparatus to be used in the exhibition of dramatic and other like performances.	1630	30th June 1863	Alfred Silvester.
An improved construction of rolling press - (*For glazing pictures.*)	1729	10th July 1863	John Peter Bourquin.
An improved mode of and apparatus for producing spectral illusions on the stage.	1744	13th July 1863	Horatio Nelson King.
Apparatus for producing optical illusions - -	1917	3rd Aug. 1863	John Munro or John Munro Graham.
Apparatus for producing optical illusions for stage effect in theatres or exhibitions.	2019	15th Aug. 1863	John William Hoffman.
An improved mode of and apparatus for producing by the aid of photography optical illusions of moving animals and bodies - - -	2063	19th Aug. 1863	Gaetano Bonelli. Henry Cook.
An improved method of and apparatus for inserting pictures in and withdrawing them from photographic albums.	2085	22nd Aug. 1863	Alfred Watson.
Mounting or setting transparent photographic pictures.	2354	24th Sept. 1863	William George Helsby.
Restoring the surface of pictures in oil without any danger to their original state.	2568	20th Oct. 1863	Max Petenkofer.
Producing dramatic and other like effects on the stage or in a room.	2841	14th Nov. 1863	De Bosco Hughes.
Apparatus for exhibiting dissolving views - -	3089	8th Dec. 1863	Peter Hubert Desvignes.
Improvements in apparatus for producing optical illusions which may be used for dramatic and other entertainments.	3209	19th Dec. 1863	Charles Bolton.
Improvements in apparatus for exhibiting the flow of real water and other effects applicable to theatrical purposes.	3272	26th Dec. 1863	Edward Tyrrel Smith.
PILLARS, COLUMNS, POSTS, SLABS, STATUARY; PILLAR LETTER BOXES.			
Manufacture of wrought metal piles, columns and shafts.	20	2nd Jan. 1863	Joseph Emerson Dowson.
Improved plates or slabs for preserving apartments from the effects of damp, and which are also applicable in the composition of plinths and foundations for walls. (*Communicated by François Jaffary.*)	89	10th Jan. 1863	Louis Henry Emmanuel Lepreux.
Means and apparatus for copying and reproducing sculpture and other objects of art. (*Communicated by François Willème.*)	256	28th Jan. 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PILLARS, &c.—*continued.*			
Manufacture of cast iron pipes, columns or any description of tubing.	465	20th Feb. 1863	William Hainsworth.
Core barrels - - - - - - (*For casting columns.*)	745	20th March 1863	John Nield. Thomas Arthur Nield.
Portable apparatus for working drills and other instruments - - - - - - (*For sculpturing.*)	794	26th March 1863	William Tod. Robert Paterson.
Hardening and colouring gypseous limestone and sand and calcareous stones. (*For columns.*) (*Communicated by Pascal Nicolas Balthazar Fioravanti.*)	940	14th April 1863	Richard Archibald Brooman.
Improvements in apparatus for manufacturing beton and artificial stone, pugging clay and other similar purposes, and in the production of artificial stone, and artistic, ornamental and decorative articles, works and surfaces. (*Imitations of statuary, pedestals, columns, vases, &c.*) (*Communicated by François Coignet.*)	1086	29th April 1863	Michael Henry.
A new or improved mode of manufacturing tablets to be used for monumental purposes.	1182	11th May 1863	James Parkinson.
Posts or pillars for fences and gates - - (*Communicated by David Middleton.*)	1311	25th May 1863	Edmund Hunt.
Using Apo-elastikon hyphrasma as a new and improved cloth for floors, roofs, walls, tanks and other linings, being impervious to damp and of great strength and durability. (*Packing for columns.*)	1603	25th June 1863	William Kirrage.
Improvements in the manufacture of pillars, posts, columns, mouldings and buildings when corrugated metal is employed, and in machinery used in corrugating, moulding and shaping metal for such purposes.	1792	16th July 1863	Edwin Maw.
Manufacture of various articles with surfaces in imitation of different kinds of marbles or similar ornamental materials - - - - (*Columns.*)	1863	27th July 1863	Frederick Ford. Lewis Ford.
A new application of rolled metal plates to the formation of railways, bridges, tramways and other structures. (*Hollow shafts, columns, &c.*)	1937	6th Aug. 1863	Joseph Emerson Dowson.
Street pillar letter-boxes and bags for the reception of post letters.	1999	13th Aug. 1863	Henry Winchcomb.
Props and supports for coal and other mines -	2398	30th Sept. 1863	George Elliot.
Improvements in taps, cocks, hydrants or valves, and apparatus connected therewith, for opening, closing, regulating and facilitating and otherwise controlling the passage or flow of water, air, steam, gas and other fluids and liquids. (*And stand posts.*)	2432	5th Oct. 1863	Charles Tomlison.
Improved apparatus for boring and cleaving stone (*Into slabs.*)	2531	16th Oct. 1863	James Polglase. Jonathan Cox.
Lamps and stoves for the application of blast heat to horticultural, agricultural and other specified purposes. (*To char posts*)	2535	16th Oct. 1863	Frederick George Stuber.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PILLARS, &c.—*continued.*			
An apparatus applicable to time, fare, distance and other tables, almanacs, arithmetical calculations, postal and other boxes. (*Applicable to pedestals.*)	2882	18th Nov. 1863	Thomas Christopher Kimpton.
Pillars and apparatus for straining wire - -	3031	2nd Dec. 1863	John Harper.
PINS AND NEEDLES.			
Improvements in wrappers or papers for needles, and in machinery or apparatus for sticking needles therein. (*Communicated by George Penrice.*)	770	24th March 1863	George Davies.
An improvement in needles - - - (*Communicated by William Penn Hyde.*)	1424	8th June 1863	William Edward Newton.
Improvements in machine knitting needles and in machinery or apparatus for making the same. (*Communicated by Thomas Sands.*)	1802	17th July 1863	John Henry Johnson.
Pins, brooches, buckles and other ornaments to be applied to various articles of wearing-apparel.	2824	12th Nov. 1863	Philip Bettle.
PIPES, TUBES AND SYPHONS; TOBACCO-PIPES; JOINING PIPES.			
Pipes for smoking tobacco or other herbaceous compounds.	12	2nd Jan. 1863	William Alfred Distin.
Machinery for the manufacture of taper metallic tubes - - - - - -	128	15th Jan. 1863	William Hulse. Campbell Lloyd Haines.
Apparatus for cutting metallic tubes or pipes, or tubes or pipes composed of other indurate substances. (*Communicated by George Henry Sanborn.*)	130	15th Jan. 1863	Thomas Critchley Barraclough.
Improvements in the manufacture of cast-iron pipes and the apparatus employed for that purpose. (*Communicated by William Hainsworth.*)	179	21st Jan. 1863	Thomas Wright.
Pipes for smoking tobacco - - - -	208	23rd Jan. 1863	Edward Strangman.
Syphons applied to draining, irrigation and other purposes, whereby they self-suspend and resume action according to requirements. (*Communicated by François Triballat.*)	221	24th Jan. 1863	William Clark.
Improvements in supplying air, gases, steam or fluids to iron and other furnaces, and to engines and vessels requiring such supply, and in the apparatus employed therein.	291	31st Jan. 1863	Edward Brown Wilson.
An improved injector or apparatus for feeding boilers with water - - - -	304	3rd Feb. 1863	Joseph Fletcher. Henry Bower.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PIPES, &c.—*continued.*			
Improvements in the manufacture of lead, tin and other metals or amalgamation of metals of a like fusible nature, into sheets of any required thickness and length, and also coating one or both sides of pipes and sheets of lead and other metal or amalgamation of metals, with tin or other substances, and in the apparatus connected therewith.	368	13th Feb. 1863	Jabez Jones.
Manufacture of cast-iron pipes, columns or any description of tubing.	465	20th Feb. 1863	William Hainsworth.
Apparatus for moulding - - - - (*Socket pipes.*)	472	21st Feb. 1863	Robert Thompson.
A new method of and apparatus for boring into water and gas supply pipes, and fixing branch pipes thereon. (*Communicated by Edme Ernest Mathelin and Pierre Lucien Mathelin.*)	556	27th Feb. 1863	Richard Archibald Brooman.
Machinery or apparatus for manufacturing bricks, tiles, pipes and mouldings.	647	9th March 1863	James Cowley.
Core barrels - - - - - (*For casting pipes.*)	745	20th March 1863	John Nield. Thomas Arthur Nield.
Portable "hooka" pipes - - - -	775	24th March 1863	Arthur John Cooke.
An improved method of uniting earthenware, metal and other pipes.	784	25th March 1863	Thomas Wilson Gore.
Construction and arrangement of the rain water pipes for buildings.	804	27th March 1863	John Taylor, junior.
Improvements in making moulds for casting and in apparatus connected therewith. (*Pipes.*)	846	2nd April 1863	John Warren Law. John Inglis.
Adjustable wrenches for nuts, pipes and pins -	987	21st April 1863	Joshua Heap.
Wrenches - - - - - - (*For pipes.*) (*Communicated by Louis Schwartzkopff.*)	994	21st April 1863	William Edward Newton.
Improvements in the manufacture of barrels for fire-arms and other descriptions of tubes, and in apparatus or machinery to be employed for that purpose.	1023	24th April 1863	James Thompson.
Machinery for punching metals - - -	1024	24th April 1863	James Thompson.
A mode of lining lead pipe with tin or its alloys -	1025	24th April 1863	William Anthony Shaw.
Improvements in the manufacture of and in the machinery and appliances for holding, drilling, turning, tapping, fitting and shaping certain parts of steam, water, gas and lamp fittings. (*Screwing tubes.*)	1041	25th April 1863	John Thomas Stroud.
Improvements in apparatus for withdrawing milk from cows and other mammiferæ, and for conducting it when withdrawn to appropriate receivers - - - - - (*Partly communicated by Thomas Barland.*)	1082	29th April 1863	Margaret Barland. Edward Henry Cradock Monckton.
Improvements in drainage and in water-closets, and in the means and apparatus necessary for the same respectively.	1096	1st May 1863	Edward Jones.
Moulding or shaping lozenge paste or other plastic materials.	1151	8th May 1863	Henry Schooling.
Construction of steam-boilers for marine, locomotive and stationary engines - - -	1243	18th May 1863	Alfred Heather. John Redfern.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PIPES, &c.—*continued.*			
Improvements in the preparation or treatment of peat or turf, and the manufacture thereof into charcoal and other fuel, drain pipes, building and other tiles, and in apparatus used therein.	1255	19th May 1863	John Kelly.
Improvements in the manufacture of certain descriptions of iron tubing, and in the means of producing and applying an ornamental case to the same, which said means are also applicable to the production of ornaments in metal for other purposes - - - -	1300	23rd May 1863	Ferdinand Potts. John Key.
Nozzles for hose and water discharge pipes - (*Communicated by Consider Harvey Morrison.*)	1425	8th June 1863	William Edward Newton.
Manufacture of bricks, quarries, slabs, tiles, earthenware pipes, and other earthenware or ceramic articles.	1492	15th June 1863	John Forrester.
Manufacture of flexible and other tubes - -	1495	15th June 1863	Isaac Blue Harris.
Steam, gas and water tube joints - -	1517	17th June 1863	John Frederick Spencer.
An improved means for the protection and preservation of lead surfaces exposed to the action of water, and for the protection of such surfaces from decomposition by atmospheric action. (*Pipes.*) (*Communicated by Professor Dr. Henry Schwarz.*)	1519	17th June 1863	Fédor De Wyldé.
Manufacture of leaden pipes - - - (*Communicated by Augustin Henri Hamon.*)	1541	19th June 1863	William Edward Newton.
A new material or compound applicable to the manufacture of pipes or tubes, to caulking or covering ships' bottoms, and to other useful purposes.	1550	20th June 1863	Charles Peterson.
Improvements in the method and construction of a packing chiefly applicable to piston rods, pumps and such like, and for forming the joints of gas, steam or water pipes.	1597	25th June 1863	Abraham Ripley.
Improvements in couplings for hose pipes, and also in connecting axles to the naves or bosses of wheels. (*Communicated by Edmund Blodget Jucket.*)	1617	27th June 1863	Edward Thomas Hughes.
Improvements in lining iron and other tubes and hollow vessels, and in manufacturing corrugated tubes of plastic materials.	1618	27th June 1863	John Chatterton.
Construction of railways and tramways - - (*Tramway pipes.*)	1739	11th July 1863	Hugh Greaves.
Improvements in means or apparatus for closing, punching and rivetting hose pipes of leather or other substances, applicable also for punching and rivetting mill bands or driving straps, and similar purposes.	1834	22nd July 1863	Charles Senior.
Improvements in making all woven and thready fabrics waterproof, and in finishing or surfacing fabrics generally. (*For hose.*) (*Communicated by Etienne Guillaume.*)	1836	22nd July 1863	Charles Bealay.
Hawse pipes, mooring pipes and deck chain pipes -	1920	4th Aug. 1863	Thomas Hutchinson Baylis.
Furnaces for heating air, steam and other elastic fluids.	1928	5th Aug. 1863	Edward Alfred Cowper.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PIPES, &c.—*continued.*			
Improvements in pipe castings for gas, water, sanitary and other general purposes, and the introduction of an elastic chemical compound to form expansive joints thereto, for prevention of leakage.	1950	7th Aug. 1863	Frederick George Mulholland.
Improved solutions to be used in the manufacture of paints and the preservation of wood, stone and metallic surfaces, and in the preservation and waterproofing of fibrous materials generally. (*Canvas for hose pipes.*) (*Communicated by Richard Eaton.*)	2065	20th Aug. 1863	George Spencer.
Improvements in apparatus and machinery for the manufacture of metallic tubes and hollow cylinders, part of which improvements may also be applied to the casting of other hollow bodies.	2217	9th Sept. 1863	William Glydon the younger.
Machinery or apparatus for making bricks, tiles, pipes and other similar articles.	2335	22nd Sept. 1863	Peter Effertz.
Construction of pipe wrenches - - -	2340	22nd Sept. 1863	William Cleminson.
An improved joint for the tubes of surface condensers. (*Communicated by John Van Voorst Booraem.*)	2363	25th Sept. 1863	Alfred Vincent Newton.
Machinery for making paper tubes used in spinning manufactories.	2366	25th Sept. 1863	Mathias Schaffhauser.
Manufacture of driving straps or bands and of flexible tubes or hose - - -	2367	26th Sept. 1863	George Spill. Thomas James Briggs. Daniel Spill.
Improvements in the construction of steam-boilers and in their fire-grates. (*Boiler tubes.*)	2377	28th Sept. 1863	Louis Joseph Joachin Jean.
Barometers, gas regulators and other apparatuses for regulating and indicating the flow and pressure of liquids and fluids - - -	2383	28th Sept. 1863	John Bailey. George William Blake. William Henry Bailey.
Steam-boilers and furnaces - - - (*Communicated by Johann Christian Carsten Meyn.*)	2444	6th Oct. 1863	Richard Archibald Brooman.
Construction of condensers - - - (*Communicated by William Judson.*)	2472	8th Oct. 1863	Alfred Vincent Newton.
Improved apparatus for cleaning out the tubes of steam-boilers, which apparatus is also applicable for cleaning out other tubes.	2500	12th Oct. 1863	Thomas Fox.
Wrenches - - - - (*For pipes.*)	2524	15th Oct. 1863	Richard Bewley, junior.
Means of uniting or joining plates or sheets of metal, which invention is applicable to the construction of boilers, tubes and other useful purposes.	2549	17th Oct. 1863	Edward Henry Cradock Monckton.
Surface condensers for steam and other vapours - (*Communicated by George Wagstaff Yapp.*)	2566	20th Oct. 1863	William Snell.
Smoking pipes - - - -	2622	23rd Oct. 1863	Alfred Wardle. Joseph Brindley.
Improvements in the construction of iron and other ships, vessels and batteries of war, and of cupolas and armour plates applicable thereto, parts of which improvements are also applicable to other useful purposes. (*Steam pipes.*)	2690	30th Oct. 1863	Barnabas Russ.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PIPES, &c.—*continued.*			
Manufacture of bricks, drain pipes, traps, sewage tanks and water-closet pans and valves, and the machinery and apparatus necessary for the same.	2708	31st Oct. 1863	Edward Jones.
An improved machine for bending metallic pipes or spouts. (*Communicated by Elijah Valentine and Moses Thompson Ridout.*)	2779	7th Nov. 1863	George Haseltine.
Construction of syphons for taking off liquid sewerage overflow of rivers and other like purposes.	2849	14th Nov. 1863	George Barker.
Paper spools or tubes used in spinning and doubling machines - - - - -	2860	14th Nov. 1863	Thomas Williams. Isaac Naylor.
Improvements in taps or valves, in pipe joints, and in the valvular mechanism of water-closets -	2865	16th Nov. 1863	Samuel Cameron. William Johnston.
Improvements in the manufacture of tubes, rings and cords of india-rubber, and in covering telegraph wires - - - - - -	2893	18th Nov. 1863	Josiah George Jennings. Manuel Leopold Jonas Lavater.
Improvements in and apparatus for washing, cleaning and separating impurities from small coal, coke, ashes or cinders. (*Races, spouts or troughs.*)	2901	19th Nov. 1863	Isaac Francis.
Improvements in the construction of dry gas meters and in the means or apparatus employed therein - - - - - - (*Producing the side tubes.*)	2912	20th Nov. 1863	George Rait. John Winsborrow.
An improved pipe stick - - - -	2916	20th Nov. 1863	Ernst Pezold.
Manufacture of paper spool tubes - -	2983	27th Nov. 1863	Charles Crabtree.
A combined hot water and hot air stove - -	3048	4th Dec. 1863	John Corbett.
An improved composition for covering steam-boilers and pipes and other surfaces.	3082	8th Dec. 1863	Henry Benson James.
An improved war rocket and rocket tube - - - (*See* "FIRE-ARMS.")	3102	9th Dec. 1863	Thomas Hanmer Fletcher. Robert Forrest.
For Cop Tubes, *see* "BOBBINS."			
PISTONS AND PISTON PACKINGS.			
Hot air engines - - - - - - (*Communicated by Elmer Townsend.*)	155	17th Jan. 1863	George Tomlinson Bousfield.
An improvement in piston valves and other pistons (*Communicated by Thomas Shrimton Davis.*)	201	22nd Jan. 1863	William Clark.
Improvements in motive-power machinery especially adapted for raising and forcing water and other liquids or fluids, parts of said improvements being applicable to steam-engines and other machines fitted with pistons.	1239	16th May 1863	James Whitehead.
Packing for the glands of piston rods and other moving mechanism where it is necessary to prevent the passage of steam or other fluids.	1371	1st June 1863	Hiram Craven Coulthard.
Certain improvements in engines for obtaining motive-power from steam or other liquid, also partly applicable to pumps. (*Communicated by John Benjamin Root.*)	1499	15th June 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PIPES, &c.—*continued.*			
Improvements in pipe castings for gas, water, sanitary and other general purposes, and the introduction of an elastic chemical compound to form expansive joints thereto, for prevention of leakage.	1950	7th Aug. 1863	Frederick George Mulholland.
Improved solutions to be used in the manufacture of paints and the preservation of wood, stone and metallic surfaces, and in the preservation and waterproofing of fibrous materials generally. (*Canvas for hose pipes.*) (*Communicated by Richard Eaton.*)	2065	20th Aug. 1863	George Spencer.
Improvements in apparatus and machinery for the manufacture of metallic tubes and hollow cylinders, part of which improvements may also be applied to the casting of other hollow bodies.	2217	9th Sept. 1863	William Glydon the younger.
Machinery or apparatus for making bricks, tiles, pipes and other similar articles.	2335	22nd Sept. 1863	Peter Effertz.
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Steam-boilers and furnaces - - - (*Communicated by Johann Christian Carsten Meyn.*)	2444	6th Oct. 1863	Richard Archibald Brooman.
Construction of condensers - - - (*Communicated by William Judson.*)	2472	8th Oct. 1863	Alfred Vincent Newton.
Improved apparatus for cleaning out the tubes of steam-boilers, which apparatus is also applicable for cleaning out other tubes.	2500	12th Oct. 1863	Thomas Fox.
Wrenches - - - - (*For pipes.*)	2524	15th Oct. 1863	Richard Bewley, junior.
Means of uniting or joining plates or sheets of metal, which invention is applicable to the construction of boilers, tubes and other useful purposes.	2549	17th Oct. 1863	Edward Henry Cradock Monckton.
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An improved machine for bending metallic pipes or spouts. (*Communicated by Elijah Valentine and Moses Thompson Ridout.*)	2779	7th Nov. 1863	George Haseltine.
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Improvements in the manufacture of tubes, rings and cords of india-rubber, and in covering telegraph wires - - - - - -	2893	18th Nov. 1863	Josiah George Jennings. Manuel Leopold Jonas Lavater.
Improvements in and apparatus for washing, cleaning and separating impurities from small coal, coke, ashes or cinders. (*Races, spouts or troughs.*)	2901	19th Nov. 1863	Isaac Francis.
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An improved war rocket and rocket tube - - (*See* "FIRE-ARMS.")	3102	9th Dec. 1863	Thomas Hanmer Fletcher. Robert Forrest.
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PISTONS AND PISTON PACKINGS.			
Hot air engines - - - - - - (*Communicated by Elmer Townsend.*)	155	17th Jan. 1863	George Tomlinson Bousfield.
An improvement in piston valves and other pistons (*Communicated by Thomas Shrimton Davis.*)	201	22nd Jan. 1863	William Clark.
Improvements in motive-power machinery especially adapted for raising and forcing water and other liquids or fluids, parts of said improvements being applicable to steam-engines and other machines fitted with pistons.	1239	16th May 1863	James Whitehead.
Packing for the glands of piston rods and other moving mechanism where it is necessary to prevent the passage of steam or other fluids.	1371	1st June 1863	Hiram Craven Coulthard.
Certain improvements in engines for obtaining motive-power from steam or other liquid, also partly applicable to pumps. (*Communicated by John Benjamin Root.*)	1499	15th June 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PISTONS, &c.—*continued.*			
Pistons	1568	22nd June 1863	William Rowan.
Improvements in the method and construction of a packing chiefly applicable to piston rods, pumps and such like, and for forming the joints of gas, steam or water pipes.	1597	25th June 1863	Abraham Ripley.
Rotary engines	1621	29th June 1863	Cyrus Avery.
Pistons of steam-engines	1711	9th July 1863	Joseph Francis Delany. John Charles Raymond Okes.
Metallic pistons	1759	14th July 1863	George Saxon.
Certain improvements in centrifugal machines for treating saccharine substances, part of the same being applicable to other centrifugal machines. (*Communicated by Mr. Charles Hänsel.*)	2342	23rd Sept. 1863	Peter Armand Lecomte de Fontainemoreau.
Packing for stuffing boxes and pistons	2415	2nd Oct. 1863	James Tees.
Caloric or heated air engines (*Communicated by Henry Messer.*)	2806	11th Nov. 1863	Walter Davis Richards.
Metallic packings	3088	8th Dec. 1863	Theophilus Alexander Blakely.
Improvements in packing pistons, piston rods and other parts of machinery, and in the preparation of material therefor.	3148	12th Dec. 1863	Peter Ward.
Improved means of communication between the guard and engine driver of a railway train. (*Air-pump piston.*)	3235	22nd Dec. 1863	Joseph Grindley Rowe.
PLANTS, SEA-WEEDS, &c. (*Treatment of.*)			
The application of a fibre obtained from a certain plant as a substitute or to be used with silk, cotton, flax and such like materials, which fibre has not hitherto been applied to any of those purposes, and for certain methods of preparing the same for such purposes.	33	5th Jan. 1863	John Alexander Cooper.
Manufacture of fibrous material for cleansing machinery and other purposes.	64	7th Jan. 1863	Henry Harben.
Improved machinery for breaking and cleaning flax, hemp and other fibre yielding plants. (*Communicated by Gelston Sanford and James Edward Mallory.*)	68	8th Jan. 1863	Alexander Guild.
Certain improvements in preparing and bleaching "rheea" and other fibrous materials and fibres, which improvements are also applicable to bleaching yarns or piece goods	300	3rd Feb. 1863	Charles Smithies. George Lancelot Smithies.
Improvements in the method of and apparatus for separating the fibres of straw, wood and other vegetable substances, and extracting the gummy and coloring matters therefrom, to render them fit for paper stock or for other purposes. (*Communicated by Azel Storrs Lyman.*)	408	14th Feb. 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PLANTS, &c.—*continued.*			
An improvement in boilers for disintegrating and pulping vegetable substances. (*Communicated by William Fittock Ladd and Samuel Armstrong Walsh.*)	467	20th Feb. 1863	William Clark.
A new or improved fibrous substitute for human and other hair, to be used for all the purposes for which human and other hair is now used, and also for the manufacture of textile fabrics.	550	27th Feb. 1863	Werner Staufen.
Improvements in treating sea-weeds and in apparatus therefor.	607	4th March 1863	Edward Alfred Wünsch.
Treatment of certain fibrous vegetable substances with a view to the production of textile materials therefrom. (*Communicated by Vittorio Secondo Ferrero.*)	658	9th March 1863	John Henry Johnson.
Apparatus for making extracts of hops and for selecting or separating the seeds and pollen from hops.	698	14th March 1863	Richard Moreland, junior.
Extraction of scents from plants, flowers and other odoriferous substances.	1109	4th May 1863	Edmund Richard Southby.
Improvements in preparing and spinning flax and other vegetable fibres and filaments, and in machinery employed therein.	1235	16th May 1863	Joseph Gibbs.
Treatment of certain vegetable fibres for the preparation of textile materials therefrom.	1252	19th May 1863	Ferrar Fenton.
Improvements in treating flax and other fibrous plants in order to prepare the fibres thereof for spinning, and in apparatus employed therein.	1254	19th May 1863	Henry John Olding.
Extracting the fibre from zostera marina and other aquatic vegetable productions.	1271	21st May 1863	James Steart.
Certain improvements in machines for separating the fibre from the flesh of plants. (*Communicated by Eduardo Juanes y Patrullo.*)	1327	26th May 1863	William Edward Newton.
Treating the waste liquor obtained in the preparation of esparto grass - - - -	1342	28th May 1863	Thomas Richardson. Robert Irvine.
Improvements in the manufacture (by the introduction of cocoa nut husk or part thereof) of a substitute for ordinary felt and kamptulicon, and in utilizing said cocoa nut husk or part thereof for packing of wine coolers, refrigerators and ice chests, and caulking of ships and vessels.	1423	8th June 1863	Henry Reynell.
Obtaining certain products from hops - -	1428	9th June 1863	George Hills.
Treatment of broom for the manufacture of paper pulp. (*Communicated by Louis Alexandre Joseph Deplanque.*)	1559	20th June 1863	William Clark.
Improvements in treating ligneous substances, in separating and recovering the fibrous portions therefrom, in preparing, bleaching and sizing the same, and in machinery employed therein. (*Broom.*) (*Communicated by Pierre Celestin Victor Baud and Theodore Casimir Delamarre.*)	2587	21st Oct. 1863	Richard Archibald Brooman.
Extracting the fibre from zostera marina and other aquatic vegetable productions.	2941	21st Nov. 1863	James Steart.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PLANTS, &c.—*continued.*			
Machinery for breaking and cleaning flax, hemp and other fibre yielding plants. (*Communicated by James Edward Mallory and Gilston Sanford.*)	2958	24th Nov. 1863	William Edward Newton.
Manufacture of paper, thread, cordage and fabrics from beetroot.	2967	25th Nov. 1863	Louis Accarain.
Improvements in packing pistons, piston rods and other parts of machinery, and in the preparation of material therefor. (*Preparing esparto grass.*)	3148	12th Dec. 1863	Peter Ward.
Manufacture of paper from a material not hitherto used for that purpose. (*Saccharum cylindricum.*) (*Communicated by Matthew Carter.*)	3169	15th Dec. 1863	Axel Stärck.
See also "FIBRES."			
PLOUGHING, DIGGING, CLOD-CRUSHING, LAND-ROLLING, HARROWING; AGRICULTURAL IMPLEMENTS; TILLING AND CULTIVATING LAND.			
Construction of harrows - - - -	83	9th Jan. 1863	William Tasker the younger.
Improvements in horse hoes and in the means of using the same in husbandry.	277	30th Jan. 1863	John William Branford.
Ploughs and harrows - - - -	427	17th Feb. 1863	Jesse Lee.
Improvements in machinery for digging, compressing and moulding peat or turf, and for retorts and kilns for drying peat or turf and making peat or turf charcoal, through the agency of hydro-caloric or superheated steam, and for collecting the products of distillation while charring the peat or turf.	528	25th Feb. 1863	Thomas Vincent Lee.
Implements for tilling and cultivating land - -	545	26th Feb. 1863	Michael Puddefoot.
A new agricultural implement for cultivating tubercles, roots and all oil plants.	580	2nd March 1863	Aimé François Pagny.
Chain harrows - - - -	630	5th March 1863	Charles Clay.
Machinery for cultivating land and sowing seed -	688	13th March 1863	William Smith.
An improved plough - - - - (*Communicated by Jean Germain Felix Clamageran.*)	689	14th March 1863	William Edward Gedge.
Improvements in agricultural implements and in apparatus for working the same.	754	21st March 1863	Frederick Roberts. Alexander Roberts.
Agricultural apparatus - - - - (*Communicated by Jean Baptiste Décours, Athanase Charles Le Lavandier and Pierre Edouard Lambert.*)	767	23rd March 1863	William Clark.
Machinery and apparatus for preparing land for seed and for harrowing land - - - -	807	27th March 1863	John King. Thomas Henry Marshall.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PLOUGHING, &c.—*continued.*			
Improvements in steam-engines and in the means of applying the same to the tilling of land, also in apparatus to be used with such engines in the tilling of land	880	7th April 1863	James Howard. Edward Tenney Bousfield. John Pinney.
Horse rakes	911	10th April 1863	John Wightman. Charles Dening.
Construction of harrows	995	21st April 1863	William Colborne Cambridge.
Hoes and cultivators	1033	25th April 1863	John Phillips Nunn. Edmund Brook Nunn.
Agricultural implements	1176	9th May 1863	Jesse Lee. Matthew Gutteridge.
Ploughs	1325	26th May 1863	James Buckingham.
Horse rakes	1368	1st June 1863	John Davey.
Improvements in cutting and transplanting turf and in apparatus to be employed therein, which apparatus is also applicable to the extraction of weeds and to the planting of seeds, roots, sets or plants.	1370	1st June 1863	Charles Belcher.
Double moulding or ridging ploughs	1372	2nd June 1863	James Mellard.
Machinery to be worked by steam or other power for clearing and ploughing land.	1379	2nd June 1863	Etienne Joseph Jarry.
Implements to be used in the cultivation of the soil	1404	5th June 1863	Joseph Seaman.
An improved sowing and harrowing machine	1672	6th July 1863	Andrew Gower. Benjamin Smyth Gower.
Improvements in traction engines and in apparatus for ploughing and tilling land by steam and other power, part of which improvements is also applicable to driving or giving motion to machinery	1726	10th July 1863	Richard Hornsby, junior. John Bonnall. William Astbury.
"Warping" or covering land, bog or peat with earth or soil.	1762	14th July 1863	William Wood.
Ploughs	1764	14th July 1863	William Roberts.
An improved implement for harrowing and smoothing land. (*Communicated by John Kelsey.*)	1827	21st July 1863	George Haseltine.
Ploughs	1839	22nd July 1863	Joseph Simmons.
Horse rakes and hand rakes	1849	23rd July 1863	Thomas Perkins.
An improved agricultural implement for hoeing and cleaning the land, and for cutting or setting out the plant of root crops at certain distances from each other.	1884	30th July 1863	John William Branford.
Improvements in apparatus for tilling land, which improvements are chiefly applicable when steam power is employed.	2128	28th Aug. 1863	John Alison.
Apparatus for tilling land	2129	28th Aug. 1863	Charles Harratt.
Improvements in instruments for tilling the soil, and in means of drawing ploughs and other implements for tilling through the land.	2351	24th Sept. 1863	William Woofe.
Construction of harrows	2391	29th Sept. 1863	John Cooper.
Harrows (*Communicated by Walter Davies Sperry.*)	2455	7th Oct. 1863	Charles Pomeroy Button.
Apparatus used for hauling agricultural implements	2513	13th Oct. 1863	John Fowler.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PLOUGHING, &c.—*continued.*			
Lamps and stoves for the application of blast heat to horticultural, agricultural and other specified purposes. (*For destroying weeds.*)	2535	16th Oct. 1863	Frederick George Stuber.
Improvements in the manufacture of pecks, hoes, adzes and other edge tools, and in tools to be used in the said manufacture.	2564	20th Oct. 1863	Joseph Vaughan.
Digging machinery - - - -	2676	29th Oct. 1863	Ormrod Coffeen Evans.
An improvement in the construction of harrows -	2752	6th Nov. 1863	Robert Sellar.
Engines and boilers specially applicable for agricultural purposes. (*Communicated by John Baptiste Pierret and André Schweizer.*)	2858	14th Nov. 1863	Richard Archibald Brooman.
Machinery for pulverizing and cleaning the soil and scattering seed, guano, bone dust and other substances thereon.	2861	14th Nov. 1863	John Walmsley.
An improved agricultural implement for cultivating land and for sowing seed.	2873	16th Nov. 1863	Levi Lemon Sovereign.
Machinery and apparatus for cultivating land -	2948	23rd Nov. 1863	James Platt.
An improved plough - - - - (*Communicated by Jean André Isidore Pharisier.*)	3011	1st Dec. 1863	William Edward Gedge.
Construction of harrows, cultivators and ploughs -	3050	4th Dec. 1863	John Green.
Improvements in engines for hauling agricultural implements and also in traction engines.	3126	11th Dec. 1863	Thomas Webb.
Construction of harrows, cultivators and ploughs -	3223	21st Dec. 1863	John Green.
PRESERVING AND HARDENING WOOD, METAL, STONE, SKIN AND OTHER SUBSTANCES.			
Coloring, bronzing and preserving iron and steel - (*Communicated by Claude Joseph Thirault.*)	171	20th Jan. 1863	Henri Adrien Bonneville.
Improvements in desiccating and in preserving matters from decay. (*Communicated by Jean Baptiste Pierre Camille Bergouknioux.*)	186	21st Jan. 1863	William Clark.
Improvements in preserving timber and in apparatus employed therein. (*Communicated by Etienne Marechal.*)	243	28th Jan. 1863	Henry Bernoulli Barlow.
An improved method of treating sheeting and plates of iron to be used in ship building and marine constructions, for protection against marine animals and marine plants.	341	6th Feb. 1863	Adolf Ellissen.
Improvements in the application of gas for the preparation of wood work generally and iron ships, for their better preservation and reception of paint or other protecting coating, and for disinfecting ships, hospitals and other places. (*Communicated by Henri de Lapparent.*)	348	7th Feb. 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PRESERVING WOOD, &c.—*continued.*			
Improvements in protecting and preserving the bottoms and sides of ships and other submerged surfaces from oxidation or fouling by incrustation, the attachment of barnacles, the action of animalculæ or from any other like causes of injury.	641	6th March 1863	Henry Revell Spicer.
An improved composition for the coating and preservation of canvas and other materials to make them waterproof and non-inflammable.	735	19th March 1863	Ellis Lever.
An improved medicated oil for the preservation of metal, wood or stone.	910	10th April 1863	Robert Smith.
Hardening and colouring gypseous limestone and sand and calcareous stones. (*Communicated by Pascal Nicolas Balthazar Fioravanti.*)	940	14th April 1863	Richard Archibald Brooman.
Improvements in treating and preparing iron, copper and other wires for telegraphic and other uses, for the purpose of preserving them from corrosion or decay.	963	17th April 1863	Richard Knight.
Preparation of stone, plaster, compo, iron, wood and such like substances, so as to preserve them from decay.	1015	24th April 1863	John Benjamin Daines.
An improved means of protecting, preserving and hardening surfaces of brick, cement, stone, stucco and other analogous substances, which invention is also applicable to the preservation of timber.	1389	3rd June 1863	Frederick Settle Barff.
Improvements in indurating iron and in protecting iron and steel from oxidation.	1456	11th June 1863	James Webster.
An improved means for the protection and preservation of lead surfaces exposed to the action of water, and for the protection of such surfaces from decomposition by atmospheric action. (*Communicated by Professor Dr. Henry Schwarz.*)	1519	17th June 1863	Fédor De Wyldé.
Certain compositions for protecting metals and metallic articles from oxidation, and for coating slate, bricks, pottery and ceramic ware. (*Communicated by Camille Baroness de Lavenant.*)	1646	2nd July 1863	Richard Archibald Brooman.
An improved composition for waterproofing, softening and preserving all kinds of leather and articles made therefrom.	1648	2nd July 1863	Edward Lloyd.
Coating or preserving iron ships or vessels, or iron used for other purposes.	1650	2nd July 1863	Frederick Ransome.
Treatment and preservation of skins of all kinds - (*Communicated by Leonard Laureau.*)	1654	3rd July 1863	William Edward Newton.
Treatment of cut tobacco for its better preservation	1680	6th July 1863	George Clayton Collyer.
An improved varnish for preserving metal and wood. (*Communicated by Messieurs Chaumont and Company.*)	1799	17th July 1863	Richard Archibald Brooman.
Improved solutions to be used in the manufacture of paints and the preservation of wood, stone and metallic surfaces, and in the preservation and waterproofing of fibrous materials generally. (*Communicated by Richard Eaton.*)	2065	20th Aug. 1863	George Spencer.
Preserving animal substances and animal and other substances used for food - - -	2099	25th Aug. 1863	Alexander Hett. Frederick William Basset.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PRESERVING WOOD, &c.—*continued.*			
An improved composition or coating for the protection and preservation of surfaces of iron, wood, and other materials - - - -	2214	9th Sept. 1863	Joseph Lillie. John Haines White.
Manufacture of driving straps or bands and of flexible tubes or hose - - - - -	2367	26th Sept. 1863	George Spill. Thomas James Briggs. Daniel Spill.
Improvements in the mode of manufacturing submarine telegraph cables, in apparatus connected therewith, and in the method or principle of laying same, and in the preparation of the several compounds described for electric insulation and other purposes.	2386	29th Sept. 1863	Frederick George Mulholland.
Improvements in the induration of stone, cement, stucco, brick or other analogous materials, also in the manufacture of artificial stone.	2550	17th Oct. 1863	Fédor De Wyldé.
Certain compositions for preserving iron ships and other submerged iron work from corrosion and from fouling.	2641	26th Oct. 1863	Marius Vian.
Improvements in the construction of iron and other ships, vessels and batteries of war, and of cupolas and armour plates applicable thereto, parts of which improvements are also applicable to other useful purposes. (*Preventing corrosion or decay.*)	2690	30th Oct. 1863	Barnabas Russ.
Preservation of animal substances - - - (*Communicated by Edouard Gorges.*)	2949	24th Nov. 1863	George Wagstaff Yapp.
Compounds or compositions for coating or covering iron or wooden ships and vessels, metallic sheathing, telegraph cables and other objects, to preserve them from decay, fouling or other destructive action - - - - -	3012	1st Dec. 1863	Jesse Gustavus Redman. George Martin.
PRESERVING AND PREPARING ARTICLES OF FOOD, DRESSING FRUIT, &c.			
Apparatus for preventing and curing blight, decay, disease and rot in potatoes.	127	15th Jan. 1863	Henry Turner.
Improvements in desiccating and in preserving matters from decay. (*Communicated by Jean Baptiste Pierre Camille Bergouhnioux.*)	186	21st Jan. 1863	William Clark.
Improvements in preserving provisions and in the apparatus employed for such purposes. (*Communicated by Alfred Henry Rémond.*)	233	27th Jan. 1863	George Davies.
Construction of air-tight boxes, cases, cupboards and similar vessels. (*For preserving food.*)	276	29th Jan. 1863	Frederick George Stubs
Means or apparatus for mincing or cutting meat or other substances.	345	7th Feb. 1863	George Turner.
Improvements in embalming and preserving from decay human bodies and bodies of other animals, also pickling, curing and flavouring animal bodies.	412	14th Feb. 1863	John Morgan, F.R.C.S.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PRESERVING FOOD, &c.—*continued.*			
Improvements in preserving provisions and in the apparatus employed for such purpose.	477	21st Feb. 1863	Alfred Henry Rémond.
An improved chopping block for butchers - -	706	16th March 1863	Thomas Powell.
Machinery for washing potatoes and other vegetables	724	18th March 1863	Francis Richmond. Henry Chandler. James Gadsby Richmond.
Certain improvements in apparatus for cleansing potatoes, and in decorticating the same and other esculent roots - - - - -	1130	6th May 1863	Samuel Hibbert. John Lawton. James Kay.
Treating liquorice root to obtain liquid and solid extracts therefrom. (*For jellies.*) (*Communicated by Frumence Nicolas Frezon.*)	1402	5th June 1863	Richard Archibald Brooman.
Cooking and culinary utensils - - - - (*Preserving pans.*)	1453	11th June 1863	Edward Deane.
Machinery for reducing cocoa nut kernels and other substances to a state of pulp.	1468	12th June 1863	John Charles Wilson.
Preservation of animal matter - - - - -	1941	6th Aug. 1863	James Young.
Obtaining farinaceous material from potatoes -	1965	8th Aug. 1863	Michael Smith.
Preserving animal substances and animal and other substances used for food - - - - -	2099	25th Aug. 1863	Alexander Hett. Frederick William Basset.
Drying or curing certain vegetable productions - (*See* "THRASHING.")	2259	14th Sept. 1863	William Gossage.
Certain compositions for preserving cheese - (*Communicated by Jean Neuenschwander.*)	2338	22nd Sept. 1863	Richard Archibald Brooman.
An improved machinery for pressing or crushing spent hops. (*Or fruits.*)	2439	5th Oct. 1863	Robert Pepper.
Machinery, apparatus or means for drying, cleaning and cooling grain and other vegetable products. (*Arrowroot.*)	2602	22nd Oct. 1863	John Weems.
Preserving certain vegetable substances - -	2753	6th Nov. 1863.	John Muckart.
Means or apparatus for effecting the chopping or separation of animal and vegetable substances.	2832	13th Nov. 1863	William Francis Dearlove.
Improvements in preserving grain, flour and other similar substances, and in the apparatus connected therewith. (*Communicated by Alphonse Louvel.*)	2926	20th Nov. 1863	Henri Adrien Bonneville.
Preservation of animal substances - - - (*Communicated by Edouard Gorges.*)	2949	24th Nov. 1863	George Wagstaff Yapp.
Preserving animal and vegetable substances -	2951	24th Nov. 1863	Davis Wilson Rea.
Receptacles for containing biscuits, fruits and other articles.	3075	7th Dec. 1863	Thomas Bate.
The manufacture of a certain sauce now and hereafter to be called the Essex Sauce.	3143	12th Dec. 1863	Robert Henry Ray.
Treating brine from salted flesh or fish for the obtainment of useful products therefrom.	3295	30th Dec. 1863	Alexander Whitelaw.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PRESSES; COMPRESSING, PACKING.			
Improvements in the finish and mode of packing cigars, and in apparatus used for these purposes.	15	2nd Jan. 1863	Henry Lyon.
Improvements in the construction and mode of working apparatus to be employed in pressing, moulding, shaping, embossing, crushing, shearing and cutting metallic and other substances.	37	5th Jan. 1863	Henry Bessemer.
Presses for pressing cotton and other substances - (*Communicated by John Hodgart.*)	47	6th Jan. 1863	Matthew Hodgart.
An improved lithographic press - - -	72	9th Jan. 1863	Charles Worssam.
Hydrostatic presses - - - - -	87	10th Jan. 1863	Robert Lüthy.
An improved method of and means or apparatus for finishing textile fabrics.	181	21st Jan. 1863	Joseph Moxon Kirk.
An improved method of preserving the contents of packages from air, water or damp.	272	29th Jan. 1863	Arthur Pritchard.
Improvements in supplying air, gases, steam or fluids to iron and other furnaces, and to engines and vessels requiring such supply, and in the apparatus employed therein. (*Applicable to hydraulic presses.*)	291	31st Jan. 1863	Edward Brown Wilson.
Means or apparatus for shaping, rolling or compressing metal.	296	2nd Feb. 1863	William Charles Barnes.
Hydraulic presses - - - - -	391	13th Feb. 1863	John Grantham.
Packing bonnet fronts, rouches and other similar articles - - - - -	422	16th Feb. 1863	John Harrington Haywood. William Vernon.
Presses for punching or cutting out leather and other substances.	430	17th Feb. 1863	Josiah Gimson.
Machinery for blocking and pressing hats and bonnets - - - - - -	490	23rd Feb. 1863	John Davis Welch. Alfred Phippen Welch.
Improvements in machinery for digging, compressing and moulding peat or turf, and for retorts and kilns for drying peat or turf, and making peat or turf charcoal, through the agency of hydro-caloric or superheated steam, and for collecting the products of distillation whilst charring the peat or turf.	528	25th Feb. 1863	Thomas Vincent Lee.
Machinery for pressing peat - - - (*Communicated by Christian Augustus Erich.*)	597	3rd March 1863	Theodor Erich.
Improvements in treating sea-weed and in apparatus therefor. (*Packing dried seaweed.*)	607	4th March 1863	Edward Alfred Wünsch.
Working presses for making up yarn in bundles -	649	9th March 1863	James Isherwood.
Improvements in wrappers or papers for needles, and in machinery or apparatus for sticking needles therein. (*Communicated by George Penrice.*)	770	24th March 1863	George Davies.
Improvements in making moulds for casting and in apparatus connected therewith - - (*Application of pressure.*)	846	2nd April 1863	John Warren Law. John Inglis.
Casings, covers or wrappers for bottles, jars and other articles.	854	2nd April 1863	Anton Bruno Seithen.
Improvements applicable to presses for baling purposes. (*Stillages.*)	950	15th April 1863	Henry Eaton.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PRESSES, &c.—*continued.*			
Construction of boxes or cases for carrying and packing bottles.	1134	6th May 1863	Thomas Beesley.
Improvements in laying veneers on to surfaces, in applying the glue for that purpose, and in the apparatus employed.	1161	9th May 1863	James Stickland.
Improvements in hoops or bands for fastening bales, and in machinery or apparatus for making the same.	1162	9th May 1863	Samuel Wilson.
An improved portable copying press - -	1202	13th May 1863	Frederic Holthausen.
Improved apparatus for pressing, smoothing and finishing garments or parts of garments.	1343	28th May 1863	Frederick Osbourn.
Improvements in expressing liquid and moisture from substances, and in separating the liquid from the solid portions thereof, applicable also to the filtration of liquids - - -	1347	28th May 1863	William Needham. James Kite.
Presses - - - - - - -	1376	2nd June 1863	David Wilson. Edward Alfred Cowper.
Means of securing identifying labels or tags to bales of fibrous material. (*Partly communicated by Henry Ware Goodrich.*)	1385	3rd June 1863	Edward Augustus Locke.
Improvements in the construction of presses for forming bales of cotton and other materials, and in the construction of fastenings for and means for applying bands to such bales. (*Partly communicated by David M'Comb.*)	1390	3rd June 1863	James Jennings M'Comb.
Construction of and mode of working hydrostatic presses and hydraulic apparatus.	1439	9th June 1863	Henry Bessemer.
Improvements in the mode of securing or fastening the ends of metal bands, and in machinery for preparing the same.	1480	13th June 1863	John Hopkinson.
An improved apparatus for shaping plastic materials and hot but not melted metals, by means of pressure, percussion or rolling. (*Communicated by Elbridge Wheeler.*)	1502	16th June 1863	Francis Stanton Williams.
Improved fleeting hydrostatic machinery adapted to presses, dry docks, slips, or the moving or lifting of heavy masses, parts of which are applicable to the expressing of oil or other fluids.	1591	24th June 1863	Paul Rapsey Hodge.
Lithographic and zincographic presses - -	1629	30th June 1863	Charles Henry Gardner.
An improved construction of rolling press -	1729	10th July 1863	John Peter Bourquin.
Construction of letter copying presses - -	1743	13th July 1863	Robert Doyne Dwyer.
Improved machinery for compressing bricks, tiles and other plastic materials.	1766	14th July 1863	James Slater.
Apparatus for working hydraulic presses - -	1850	24th July 1863	John Kirkland.
Fastenings for packing cases - - -	1890	30th July 1863	Richard Hoe. Henry James Cole.
Construction of force pumps - - - (*For hydraulic presses.*)	1893	31st July 1863	George Sigl.
Improvements in the method of fastening hoops for packing bales, and in the machinery or apparatus employed therein.	1967	10th Aug. 1863	John Alexander Fullarton.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PRESSES, &c.—*continued.*			
Lithographic printing presses	1970	10th Aug. 1863	Richard Dickson.
Machinery for pressing cotton and for crushing and pressing other substances, the said machinery being adaptable for locomotion on railways or on common roads.	2056	18th Aug. 1863	Charles George Wilson.
Improvements in expressing and filtering oil from seeds and liquids from other substances containing the same, and in apparatus employed therein. (*Communicated by Guillaume Cregut and Tschiffeli, Brothers.*)	2078	21st Aug. 1863	Richard Archibald Brooman.
Certain improvements in means to be employed for securing the ends of bands in packing "bale goods," and in machinery for manufacturing "rivets" to be employed for the purpose, and also in apparatus for forming apertures in the aforesaid bands or hoops	2148	31st Aug. 1863	George Bebbington. Jonathan Robert Hampson.
Hydraulic apparatus (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Machinery for pressing peat (*Communicated by Christian Augustus Erich.*)	2163	1st Sept. 1863	Theodor Erich.
Improvements in glazing and rolling press papers, pasteboard and other paper requiring to be glazed or rolled, and in the means or apparatus employed therein	2232	10th Sept. 1863	Holmes Wright. John William Wright. William Clough.
An improved method of preparing the fibres of hemp, flax and other vegetable materials for manufacturing purposes.	2258	14th Sept. 1863	George Whitfield Billings.
An improved machine for pressing or crushing spent hops.	2439	5th Oct. 1863	Robert Pepper.
Improvements in washing, cleansing, salting and packing butter, and in apparatus to be used therein.	2465	8th Oct. 1863	Michael Smith.
Certain improvements in "baling boxes" used in packing cotton or other fibrous materials	2541	17th Oct. 1863	William Routledge. Frederick Francis Ommanney.
Means of uniting or joining plates or sheets of metal, which invention is applicable to the construction of boilers, tubes and other useful purposes. (*Hydraulic presses.*)	2549	17th Oct. 1863	Edward Henry Cradock Monckton.
Improvements in the application of steam combined with air as a motive-power and for other purposes. (*For working presses.*)	2620	23rd Oct. 1863	James Parker.
Certain improvements in the expression of oil from oil yielding substances, and in the production of oil cake and other residuary matters.	2648	27th Oct. 1863	John Marshall.
Machinery for punching, cutting and pressing metals and other materials.	2657	27th Oct. 1863	Edward Richard Hollands.
Printing presses	2787	10th Nov. 1863	Thomas Weston.
Presses for lithographic and other printing (*Communicated by Jean Theodore Dupuy.*)	2856	14th Nov. 1863	Richard Archibald Brooman.
Presses	2946	23rd Nov. 1863	Edward Brown Wilson. John Imray.
Hydraulic apparatus for hoisting, lifting and pressing.	2953	24th Nov. 1863	Christian Schiele.
Apparatus used for pressing and ironing garments	2961	24th Nov. 1863	Peter Tait.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PRESSES, &c.—*continued.*			
Presses for cutting, perforating and shaping metals	2964	25th Nov. 1863	Thomas Wilson.
Apparatus to be employed in expressing oils and fatty matters.	3018	1st Dec. 1863	James Thom.
Hydraulic pressure gauges suitable for measuring the pressure in the cylinders of hydraulic presses.	3060	5th Dec. 1863	Sydney Smith.
Improvements in presses for bending metal plates into the various forms required in naval architecture and for other purposes - - (*Communicated by John Cochrane.*)	3110	10th Dec. 1863	William Galloway. John Galloway.
Manufacture and strengthening of guns, hydraulic press and other cylinders.	3164	15th Dec. 1863	Ludwig Nobel.
Improvements in pressing cotton and other fibrous substances into bales, and in apparatus to be used for this purpose. (*Communicated by George Brunton.*)	3170	15th Dec. 1863	Charles James Robinson.
Cases for packing and storing bottles - -	3184	17th Dec. 1863	George Henry Ellis.
Improvements in wrappers or envelopes for receiving or enclosing papers and various other articles.	3227	21st Dec. 1863	Julius Lorenz Wittenberg, LL.D.
Hydraulic pumps - - - - -	3237	22nd Dec. 1863	Frederick Hazeldine.
Certain improvements in means to be employed for securing the ends of bands in packing "bale goods," and in machinery for manufacturing "holdfasts" to be employed for the purpose.	3244	23rd Dec. 1863	Richard Edward Van Hees.
PRINTING AND TRANSFERRING; TYPE AND OTHER SURFACES FOR PRINTING; COMPOSING AND DISTRIBUTING TYPE.			
Printing presses - - - - - (*Communicated by Nathaniel Knight.*)	46	6th Jan. 1863	John Adams Knight.
An improved lithographic press - -	72	9th Jan. 1863	Charles Worssam.
Machinery or apparatus for printing or staining woven fabrics, warps, paper and other articles. (*Communicated by Joseph Kien.*)	79	9th Jan. 1863	Edward Thomas Hughes.
A new or improved instrument or apparatus to be attached to pianofortes, organs and other similar keyed musical instruments, for printing the score of any music performed on the said instruments.	101	13th Jan. 1863	Joseph Beverley Fenby.
Machinery for printing several colours in succession on the same surface.	147	16th Jan. 1863	Martin Moeglen.
Printing and dyeing textile fabrics and yarns -	151	17th Jan. 1863	John Lightfoot.
Improvements in obtaining colouring matters, part of which improvements is also applicable to dyeing and printing - - - -	192	21st Jan. 1863	Heinrich Caro. John Dale.
An improved paste or composition to cover the rollers used by letter-press printers.	198	22nd Jan. 1863	James Martin Binger.
An improved solution or mixture for "fixing" certain colors employed in printing calico and other fabrics.	199	22nd Jan. 1863	Robert Penney.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PRINTING, &c.—*continued.*			
Certain improvements in the mode of fixing coloring matter on cotton, silk, wool and other fibres and materials, and certain improvements in finishing such like and other textile fabrics and yarns	219	24th Jan. 1863	Edward Booth. George Booth. Andrew Swallow.
Locking up or fastening forms of type or other printing surfaces.	251	28th Jan. 1863	Robert Ward.
Cylindrical chromo-lithographic printing machines	254	28th Jan. 1863	William Conisbee.
Improvements in obtaining, transferring and printing from photographic pictures or images, also in preparing materials for the same.	267	29th Jan. 1863	John Pouncy.
Apparatus or means for printing woven fabrics by blocks.	390	13th Feb. 1863	James Robertson.
Improvements in dressing millstones, in ornamenting or engraving on glass, pottery and other similar substances, and in materials employed therein. (*Communicated by Cyprien Marie Tessié du Motay and Charles Raphael Maréchal.*)	488	23rd Feb. 1863	Richard Archibald Brooman.
Ornamenting plush and other such textile fabrics	493	23rd Feb. 1863	Thomas Dickens. Albert Lungley Dickens. Harvey Heywood.
Printing and dyeing cotton and other fabrics	517	25th Feb. 1863	Frederick Albert Gatty.
Producing stereotype plates for printing purposes (*Communicated by Richard March Hoe.*)	529	25th Feb. 1863	William Edward Newton.
Improvements in cloth blankets and other fabrics to be used in machinery for printing fabrics, paper-hangings and letter press. (*Communicated by Achille Clément.*)	578	2nd March 1863	Frederick Tolhausen.
Improvements in preparing and obtaining photographic impressions, and in the application of such impressions. (*Communicated by Alphonse Louis Poitevin.*)	586	2nd March 1863	William Clark.
Transferring by the means of typography colours and metals on surfaces in general.	684	13th March 1863	Jean Baptiste Marie Amédée Bourreiff.
Printing and dyeing woollen fabrics	686	13th March 1863	Albert Wydler. Christopher Thornton.
Type composing and distributing machines	697	14th March 1863	William Young.
Preparation of coloring matters for dyeing and printing. (*Communicated by Robert Hodgson Gratrix.*)	700	14th March 1863	William Boaler.
Improvements in processes for facilitating and combining the art of writing with engraving together on stone, applicable to maps, plans, specifications and other lithography, which improvements are also available for retransfers to zinc or stone, or printing from original.	714	17th March 1863	William Henry Emett.
Certain improvements in the method of producing surfaces in imitations of woods, and in printing therefrom.	779	25th March 1863	Joseph Hardman Worrall.
Engraving upon metals (*Rollers for calico printing.*) (*Communicated by Louis Charles Emile Vial.*)	795	26th March 1863	George Davies.
A new journal axle or bearing particularly applicable to rolls. (*For calico printing.*)	808	28th March 1863	Benjamin William Goode.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PRINTING, &c.—*continued.*			
Reproducing or obtaining fac-similes of the veins, pores, knots and figures of wood, upon paper and other surfaces. (*Communicated by François Magny and Alexandre Cottais.*)	879	7th April 1863	Richard Archibald Brocman.
Ornamentation by printing of felt hats	908	10th April 1863	Samuel Shelmerdine. John Dransfield.
Machinery for preparing and printing wool and other fibres. (*Communicated by Stanislas Vigoureux.*)	913	10th April 1863	Henry William Ripley.
Printing machinery	925	13th April 1863	John Gill.
An improved process for obtaining printing surfaces	986	21st April 1863	Henry Rafter.
A new and improved mode of manufacturing type for letter-press printing.	1030	25th April 1863	Samuel Harrison.
Apparatus for printing fibrous materials (*Communicated by Stanislas Vigoureux.*)	1085	29th April 1863	Henry William Ripley.
Production of show tablets, advertisement tablets, name plates, architectural facings and decorations, and other ornamental, decorative and inscriptive articles	1111	4th May 1863	John Morris Johnson. Edmund Johnson. Charles Johnson. Louis Bertling.
Transferring plain or coloured prints or designs to wood or other surfaces.	1260	19th May 1863	William Smith.
A new double-action self-feeding stamping and printing machine.	1308	25th May 1863	George Howell.
Apparatus for ruling paper and other materials, either alone or in combination with typographical or lithographical printing. (*Communicated by Bonaventure Tournier.*)	1320	25th May 1863	William Clark.
Apparatus for printing fabrics, papers and other surfaces in colors. (*Communicated by Joseph Saroglia.*)	1365	1st June 1863	William Clark.
An improved ruling and printing machine to be used either combined or separately.	1380	2nd June 1863	Edme Henry Létang.
Apparatus for applying one or more colors of ink to type in letter-press printing by hand.	1446	10th June 1863	Thomas Evans. Edward Hughes.
Fixing mordants in the processes of dyeing and printing textile fabrics or yarns.	1505	16th June 1863	John Lightfoot.
Improvements in treating oil from shale or other bituminous minerals, and similar oils, to obtain various products therefrom, and in apparatus therefor. (*Printing ink.*)	1564	22nd June 1863	John Mc Lean.
Printing machinery (*Communicated by Gustave Gilbert Leboyer.*)	1573	22nd June 1863	William Edward Newton.
Improvements in photo-lithography, photo-zincography and photographic engraving on copper or steel plates, or on any other suitable substances.	1588	23rd June 1863	William Toovey.
Ornamenting porcelain	1594	24th June 1863	James Leigh Hughes.
Lithographic and zincographic presses	1629	30th June 1863	Charles Henry Gardner.
Manufacture and application of printing apparatus	1661	4th July 1863	John Cameron Mac Donald. Joseph Calverley.
Dyeing and printing (*Communicated by Nicholas Rave, aîné.*)	1748	13th July 1863	James Laing.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PRINTING, &c.—*continued.*			
An improved process for making paper transparent and transferring designs. (*Communicated by Henry Loewenberg and Henry Schoonmaker.*)	1771	15th July 1863	William Clark.
Figuring, ornamenting and coloring fulled and felted fabrics and articles. (*Communicated by the Société Troty Latouche, frères.*)	1773	15th July 1863	Michael Henry.
Certain improvements in printing stuffs and other fibrous fabrics.	1815	20th July 1863	Antoine Alexandre Pelaz.
Means or apparatus for the production of printed or particolored yarns.	1885	30th July 1863	Julius Boeddinghaus.
An improved mode of and apparatus for producing stereotype plates. (*Communicated by Stephen Davis Tucker.*)	1934	5th Aug. 1863	Alfred Vincent Newton.
Dyeing and printing - - - -	1936	6th Aug. 1863	Charles Lowe.
Lithographic printing presses - - - -	1970	10th Aug. 1863	Richard Dickson.
Preparing yarns for printing - - -	2003	13th Aug. 1863	John Henderson.
Manufacture of paper-hangings - - -	2025	15th Aug. 1863	Robert Smith. Jabez Booth.
Improved apparatus for printing - - - (*Communicated by Benjamin Livermore.*)	2031	15th Aug. 1863	Alfred Vincent Newton.
Printing carpets, piled fabrics, druggets and other similar articles.	2135	29th Aug. 1863	William Tingey.
Improvements in printing in colours pictures or devices to be used in ornamenting porcelain, stoneware, earthenware, or any other substances where the colors can be annealed or melted or burnt in.	2146	31st Aug. 1863	Henry Edward Kramer.
Improvements in printing on certain and other terry and velvet pile carpets, felted cloths and other fabrics and materials, and in the processes and apparatus connected therewith.	2207	8th Sept. 1863	Joseph Burch.
Improvements in machinery for stamping or obliterating and printing especially applicable to post-office purposes, parts of which improvements are applicable to machines in which cams are employed.	2261	15th Sept. 1863	George Howell.
Improvements in printing postage stamps, bankers' bills, shares and other similar documents, and in machinery employed therein - - -	2306	19th Sept. 1863	Louis François Chezaud. Henry Jeremie Christen.
An improved compound reactive agent and universal mordant to be employed in the processes of dyeing and printing. (*Communicated by Antonio Bozzi.*)	2416	2nd Oct. 1863	John Garrett Tongue.
Printing or dyeing textile fabrics - - -	2489	10th Oct. 1863	Duncan Proudfoot.
Manufacture of copper rollers used for printing calico or other materials - - - -	2561	20th Oct. 1863	William Ingham. Isaac Wood.
Manufacture of show cards, window tickets and ornamental labels, as advertising mediums - (*Leather letters.*)	2698	31st Oct. 1863	Anon Wasserburger. Theodore Bessunger.
Manufacture of woollen garments - - - (*Printing outlines.*)	2747	5th Nov. 1863	Robert Thomas Tait.
Certain improvements in machinery for printing cotton and other fabrics.	2751	6th Nov. 1863	Charles Coates.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PRINTING, &c.—*continued.*			
Printing presses	2787	10th Nov. 1863	Thomas Weston.
Presses for lithographic and other printing (*Communicated by Jean Theodore Dupuy.*)	2856	14th Nov. 1863	Richard Archibald Brooman.
Improvements in printing floor-cloths, carpets and similar goods, and in the machinery or apparatus to be employed therein.	2952	24th Nov. 1863	William Howlett.
Printing machinery (*Communicated by Stephen Davis Tucker.*)	3039	2nd Dec. 1863	William Edward Newton.
Improvements in the manufacture of rollers or cylinders used by calico printers, which improvements are also applicable to other purposes.	3040	3rd Dec. 1863	Thomas Knowles.
Process or processes of producing aniline black on cotton fabrics or yarns. (*Communicated by Honoré Cordillot.*)	3045	4th Dec. 1863	Edward Joseph Hughes.
Cylinder printing-machines	3134	11th Dec. 1863	Edwin Ullmer. William Ullmer.
Improvements in the composition of ink suitable for printing and coloring or shading bank note and other instruments and documents, by the copper plate, lithographic, typographic, xylographic or other processes of printing. (*Communicated by Tracy Edson.*)	3204	19th Dec. 1863	Edward Thomas Hughes.
Treating printed and dyed fabrics	3259	24th Dec. 1863	Nathaniel Lloyd. Edwin Hargraves.
Manufacture of ornamental fabrics	3305	31st Dec. 1863	Robert Bell.
For Engraving Cylinders, *see* "ENGRAVING." For Telegraphic Printing, *see* "TELEGRAPHS." For Printing-colours, *see* "DYES."			
PROPELLING, DRIVING, WORKING; TRANSMITTING POWER AND MOTION; CONVERTING MOVEMENTS.			
I.—Propelling Ships; Locomotion on Water, Propellers, Paddle-wheels and Screws.			
Manufacture of wrought metal piles, columns and shafts.	20	2nd Jan. 1863	Joseph Emerson Dowson.
New and improved propellers for vessels driven by steam or other power.	66	8th Jan. 1863	Roderick Grogan.
Improvements in screw and paddle propellers and a submarine propeller, also applicable to the raising and forcing of water or other fluids.	98	12th Jan. 1863	Arthur Irwin Mahon, C.E.
Improvements in propelling ships and vessels, and in apparatus employed therein	249	28th Jan. 1863	Henry Oceanus Cook. Elijah George Terrey.
Propulsion of vessels	334	6th Feb. 1863	Alexander Johnston.
Obtaining and applying motive-power (*For steam vessels.*)	356	9th Feb. 1863	John Macintosh.
An improvement in paddle-wheels	429	17th Feb. 1863	William Charles Ford.
Improvements in obtaining and applying motive-power, which improvements or parts thereof are applicable for raising, forcing and measuring fluids.	512	24th Feb. 1863	Robert William Thomson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PRINTING, &c.—*continued.*			
Certain improvements in the mode of fixing coloring matter on cotton, silk, wool and other fibres and materials, and certain improvements in finishing such like and other textile fabrics and yarns - - - - - - -	219	24th Jan. 1863	Edward Booth. George Booth. Andrew Swallow.
Locking up or fastening forms of type or other printing surfaces.	251	28th Jan. 1863	Robert Ward.
Cylindrical chromo-lithographic printing machines	254	28th Jan. 1863	William Conisbee.
Improvements in obtaining, transferring and printing from photographic pictures or images, also in preparing materials for the same.	267	29th Jan. 1863	John Pouncy.
Apparatus or means for printing woven fabrics by blocks.	390	13th Feb. 1863	James Robertson.
Improvements in dressing millstones, in ornamenting or engraving on glass, pottery and other similar substances, and in materials employed therein. (*Communicated by Cyprien Marie Tessié du Motay and Charles Raphael Maréchal.*)	488	23rd Feb. 1863	Richard Archibald Brooman.
Ornamenting plush and other such textile fabrics -	493	23rd Feb. 1863	Thomas Dickens. Albert Lungley Dickens. Harvey Heywood.
Printing and dyeing cotton and other fabrics -	517	25th Feb. 1863	Frederick Albert Gatty.
Producing stereotype plates for printing purposes - (*Communicated by Richard March Hoe.*)	529	25th Feb. 1863	William Edward Newton.
Improvements in cloth blankets and other fabrics to be used in machinery for printing fabrics, paper-hangings and letter press. (*Communicated by Achille Clément.*)	578	2nd March 1863	Frederick Tolhausen.
Improvements in preparing and obtaining photographic impressions, and in the application of such impressions. (*Communicated by Alphonse Louis Poitevin.*)	586	2nd March 1863	William Clark.
Transferring by the means of typography colours and metals on surfaces in general.	684	13th March 1863	Jean Baptiste Marie Amédée Bourreiff.
Printing and dyeing woollen fabrics - -	686	13th March 1863	Albert Wydler. Christopher Thornton.
Type composing and distributing machines -	697	14th March 1863	William Young.
Preparation of coloring matters for dyeing and printing. (*Communicated by Robert Hodgson Gratrix.*)	700	14th March 1863	William Boaler.
Improvements in processes for facilitating and combining the art of writing with engraving together on stone, applicable to maps, plans, specifications and other lithography, which improvements are also available for retransfers to zinc or stone, or printing from original.	714	17th March 1863	William Henry Emett.
Certain improvements in the method of producing surfaces in imitations of woods, and in printing therefrom.	779	25th March 1863	Joseph Hardman Worrall.
Engraving upon metals - - - - (*Rollers for calico printing.*) (*Communicated by Louis Charles Emile Vial.*)	795	26th March 1863	George Davies.
A new journal axle or bearing particularly applicable to rolls. (*For calico printing.*)	808	28th March 1863	Benjamin William Goode.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PRINTING, &c.—*continued.*			
Reproducing or obtaining fac-similes of the veins, pores, knots and figures of wood, upon paper and other surfaces. (*Communicated by François Magny and Alexandre Cottais.*)	879	7th April 1863	Richard Archibald Brocman.
Ornamentation by printing of felt hats - -	908	10th April 1863	Samuel Shelmerdine. John Dransfield.
Machinery for preparing and printing wool and other fibres. (*Communicated by Stanislas Vigoureux.*)	913	10th April 1863	Henry William Ripley.
Printing machinery - - - - -	925	13th April 1863	John Gill.
An improved process for obtaining printing surfaces	986	21st April 1863	Henry Rafter.
A new and improved mode of manufacturing type for letter-press printing.	1030	25th April 1863	Samuel Harrison.
Apparatus for printing fibrous materials - - (*Communicated by Stanislas Vigoureux.*)	1085	29th April 1863	Henry William Ripley.
Production of show tablets, advertisement tablets, name plates, architectural facings and decorations, and other ornamental, decorative and inscriptive articles - - - - -	1111	4th May 1863	John Morris Johnson. Edmund Johnson. Charles Johnson. Louis Bertling.
Transferring plain or coloured prints or designs to wood or other surfaces.	1260	19th May 1863	William Smith.
A new double-action self-feeding stamping and printing machine.	1308	25th May 1863	George Howell.
Apparatus for ruling paper and other materials, either alone or in combination with typographical or lithographical printing. (*Communicated by Bonaventure Tournier.*)	1320	25th May 1863	William Clark.
Apparatus for printing fabrics, papers and other surfaces in colors. (*Communicated by Joseph Saroglia.*)	1365	1st June 1863	William Clark.
An improved ruling and printing machine to be used either combined or separately.	1380	2nd June 1863	Edme Henry Létang.
Apparatus for applying one or more colors of ink to type in letter-press printing by hand.	1446	10th June 1863	Thomas Evans. Edward Hughes.
Fixing mordants in the processes of dyeing and printing textile fabrics or yarns.	1505	16th June 1863	John Lightfoot.
Improvements in treating oil from shale or other bituminous minerals, and similar oils, to obtain various products therefrom, and in apparatus therefor. (*Printing ink.*)	1564	22nd June 1863	John M^{c}Lean.
Printing machinery - - - - (*Communicated by Gustave Gilbert Leboyer.*)	1573	22nd June 1863	William Edward Newton.
Improvements in photo-lithography, photo-zincography and photographic engraving on copper or steel plates, or on any other suitable substances.	1588	23rd June 1863	William Toovey.
Ornamenting porcelain - - - - -	1594	24th June 1863	James Leigh Hughes.
Lithographic and zincographic presses - -	1629	30th June 1863	Charles Henry Gardner.
Manufacture and application of printing apparatus	1661	4th July 1863	John Cameron Mac Donald. Joseph Calverley.
Dyeing and printing - - - - (*Communicated by Nicholas Rave, aîné.*)	1748	13th July 1863	James Laing.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PRINTING, &c.—*continued.*			
An improved process for making paper transparent and transferring designs. (*Communicated by Henry Loewenberg and Henry Schoonmaker.*)	1771	15th July 1863	William Clark.
Figuring, ornamenting and coloring fulled and felted fabrics and articles. (*Communicated by the Société Troty Latouche, frères.*)	1773	15th July 1863	Michael Henry.
Certain improvements in printing stuffs and other fibrous fabrics.	1815	20th July 1863	Antoine Alexandre Pelaz.
Means or apparatus for the production of printed or particolored yarns.	1885	30th July 1863	Julius Boeddinghaus.
An improved mode of and apparatus for producing stereotype plates. (*Communicated by Stephen Davis Tucker.*)	1934	5th Aug. 1863	Alfred Vincent Newton.
Dyeing and printing - - - -	1936	6th Aug. 1863	Charles Lowe.
Lithographic printing presses - - - -	1970	10th Aug. 1863	Richard Dickson.
Preparing yarns for printing - - -	2003	13th Aug. 1863	John Henderson.
Manufacture of paper-hangings - - -	2025	15th Aug. 1863	Robert Smith. Jabez Booth.
Improved apparatus for printing - - - (*Communicated by Benjamin Livermore.*)	2031	15th Aug. 1863	Alfred Vincent Newton.
Printing carpets, piled fabrics, druggets and other similar articles.	2135	29th Aug. 1863	William Tingey.
Improvements in printing in colours pictures or devices to be used in ornamenting porcelain, stoneware, earthenware, or any other substances where the colors can be annealed or melted or burnt in.	2146	31st Aug. 1863	Henry Edward Kramer.
Improvements in printing on certain and other terry and velvet pile carpets, felted cloths and other fabrics and materials, and in the processes and apparatus connected therewith.	2207	8th Sept. 1863	Joseph Burch.
Improvements in machinery for stamping or obliterating and printing especially applicable to post-office purposes, parts of which improvements are applicable to machines in which cams are employed.	2261	15th Sept. 1863	George Howell.
Improvements in printing postage stamps, bankers' bills, shares and other similar documents, and in machinery employed therein - - -	2306	19th Sept. 1863	Louis François Chezaud. Henry Jeremie Christen.
An improved compound reactive agent and universal mordant to be employed in the processes of dyeing and printing. (*Communicated by Antonio Bozzi.*)	2416	2nd Oct. 1863	John Garrett Tongue.
Printing or dyeing textile fabrics - - -	2489	10th Oct. 1863	Duncan Proudfoot.
Manufacture of copper rollers used for printing calico or other materials - - - -	2561	20th Oct. 1863	William Ingham. Isaac Wood.
Manufacture of show cards, window tickets and ornamental labels, as advertising mediums - (*Leather letters.*)	2698	31st Oct. 1863	Anon Wasserburger. Theodore Bessunger.
Manufacture of woollen garments - - - (*Printing outlines.*)	2747	5th Nov. 1863	Robert Thomas Tait.
Certain improvements in machinery for printing cotton and other fabrics.	2751	6th Nov. 1863	Charles Coates.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PRINTING, &c.—*continued.*			
Printing presses	2787	10th Nov. 1863	Thomas Weston.
Presses for lithographic and other printing (*Communicated by Jean Theodore Dupuy.*)	2856	14th Nov. 1863	Richard Archibald Brooman.
Improvements in printing floor-cloths, carpets and similar goods, and in the machinery or apparatus to be employed therein.	2952	24th Nov. 1863	William Howlett.
Printing machinery (*Communicated by Stephen Davis Tucker.*)	3039	2nd Dec. 1863	William Edward Newton.
Improvements in the manufacture of rollers or cylinders used by calico printers, which improvements are also applicable to other purposes.	3040	3rd Dec. 1863	Thomas Knowles.
Process or processes of producing aniline black on cotton fabrics or yarns. (*Communicated by Honoré Cordillot.*)	3045	4th Dec. 1863	Edward Joseph Hughes.
Cylinder printing-machines	3134	11th Dec. 1863	Edwin Ullmer. William Ullmer.
Improvements in the composition of ink suitable for printing and coloring or shading bank note and other instruments and documents, by the copper plate, lithographic, typographic, xylographic or other processes of printing. (*Communicated by Tracy Edson.*)	3204	19th Dec. 1863	Edward Thomas Hughes.
Treating printed and dyed fabrics	3259	24th Dec. 1863	Nathaniel Lloyd. Edwin Hargraves.
Manufacture of ornamental fabrics	3305	31st Dec. 1863	Robert Bell.
For Engraving Cylinders, *see* "ENGRAVING." For Telegraphic Printing, *see* "TELEGRAPHS." For Printing-colours, *see* "DYES."			
PROPELLING, DRIVING, WORKING; TRANSMITTING POWER AND MOTION; CONVERTING MOVEMENTS.			
I.—Propelling Ships; Locomotion on Water, Propellers, Paddle-wheels and Screws.			
Manufacture of wrought metal piles, columns and shafts.	20	2nd Jan. 1863	Joseph Emerson Dowson.
New and improved propellers for vessels driven by steam or other power.	66	8th Jan. 1863	Roderick Grogan.
Improvements in screw and paddle propellers and a submarine propeller, also applicable to the raising and forcing of water or other fluids.	96	12th Jan. 1863	Arthur Irwin Mahon, C.E.
Improvements in propelling ships and vessels, and in apparatus employed therein	249	28th Jan. 1863	Henry Oceanus Cook. Elijah George Terrey.
Propulsion of vessels	334	6th Feb. 1863	Alexander Johnston.
Obtaining and applying motive-power (*For steam vessels.*)	356	9th Feb. 1863	John Macintosh.
An improvement in paddle-wheels	429	17th Feb. 1863	William Charles Ford.
Improvements in obtaining and applying motive-power, which improvements or parts thereof are applicable for raising, forcing and measuring fluids.	512	24th Feb. 1863	Robert William Thomson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PROPELLING, &c.—*continued.*			
Machines for spinning and doubling	392	13th Feb. 1863	William Robertson.
Machines for spinning and doubling	393	13th Feb. 1863	George Wrigley. Samuel Morris.
Improvements in lever horse power machines, the cog gearing employed being applicable to other machines. (*Communicated by Cyrus Avery.*)	397	14th Feb. 1863	George Haseltine.
Certain improvements in cutting or producing screws or threads, and in apparatus connected therewith. (*Adjusting the dies.*)	404	14th Feb. 1863	William Wood.
Driving sewing-machines	405	14th Feb. 1863	James Lewis.
Improvements in carding-engines and in apparatus connected therewith (*Driving the coiler.*)	410	14th Feb. 1863	James Higgins. Henry Higgins.
Presses for punching or cutting out leather and other substances.	430	17th Feb. 1863	Josiah Gimson.
Machinery or apparatus for cleaning cotton from seeds	445	18th Feb. 1863	John Platt. William Richardson.
Apparatus for traversing guns (*Communicated by Joseph Atkinson Yates.*)	447	18th Feb. 1863	Frederic John Reed.
Machinery or apparatus for preparing cotton and other fibrous materials for spinning.	494	23rd Feb. 1863	John Tatham.
Improved brick making machinery	506	24th Feb. 1863	David Banister Chatterton
Sewing-machines (*Communicated by Frederick William Grote and Claus Ortgiers Tietjen.*)	514	24th Feb. 1863	William Clark.
Electro-magnetic telegraphs (*Adjusting tension of driving bands.*)	516	25th Feb. 1863	Henry Wilde.
An improved machine for making spiral lighters or spills from wood or other substance, and which machine will make and colour them when desired at one process or operation.	537	26th Feb. 1863	Charles Ritchie.
Machinery or apparatus for cleaning, steaming and preparing cotton or other fibrous materials to be spun.	569	28th Feb. 1863	Daniel Collinge.
Certain improvements in machinery or apparatus for preparing, spinning and doubling cotton and other fibrous substances.	582	2nd March 1863	Edward Habel. Edmund Suckow.
Apparatus for steering ships	587	3rd March 1863	Thomas Edward Symonds
Reaping and mowing machines (*Communicated by Walter Abbott Wood.*)	598	3rd March 1863	David Ball Parsons.
Machinery or apparatus for preparing wool or other fibrous substances for spinning	616	5th March 1863	Thomas Thornton. Edwin Thornton. Robert Thornton.
Certain improvements in machinery or apparatus for grinding "cards" employed in carding-engines	618	5th March 1863	William Allen. William Johnson.
Locomotive and stationary engines	635	6th March 1863	Alexander Woodland Makinson.
Locomotive boring and winding engines	668	11th March 1863	Andrew Barclay.
Machinery for opening twisted yarns and woven fabrics.	671	11th March 1863	James Tomlinson.
Back beam warping machine	673	11th March 1863	William Rossetter.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PROPELLING, &c.—*continued.*			
Certain improvements in looms for weaving (*Communicated by Alexander Frey.*)	680	13th March 1863	Henry Bernoulli Barlow.
Machinery for rolling armour plates, bridge plates, boat plates, and other plates and bars of iron	681	13th March 1863	John Harris. Joseph Butler. John Henry Fraser.
Machinery for sawing or cutting wood (*Feed motion.*)	693	14th March 1863	John Walker M'Carter.
Sewing-machines	741	19th March 1863	George Henry Smith.
Reaping or mowing machines	751	20th March 1863	John Brigham. Richard Bickerton.
Improvements in agricultural implements and in apparatus for working the same	754	21st March 1863	Frederick Roberts. Alexander Roberts.
Locomotives usually called "traction engines" to be used on common roads. (*Driving and disengaging gear.*)	756	21st March 1863	George Arthur Biddell.
Improvements in the manufacture of ornamental twist lace and in machinery used therein	773	24th March 1863	Alfred Topham. Joseph Topham. Jabez Topham.
Portable apparatus for working drills and other instruments	794	26th March 1863	William Tod. Robert Paterson.
Apparatus connected with machinery used in manufacturing compressed fuel.	801	27th March 1863	John Grantham.
Improvements in reaping and mowing machines, part of which improvements are applicable to horse works.	810	28th March 1863	Reuben Sims.
Looms for weaving	835	1st April 1863	James Hindle. William Fielding Calvert. Emanuel Thornton.
Means of actuating shuttles in looms for weaving narrow fabrics.	861	4th April 1863	Josiah Gimson.
Reaping and mowing machines	874	7th April 1863	Adam Carlisle Bamlett.
Improvements in steam-engines and in the means of applying the same to the tilling of land, also in apparatus to be used with such engines in the tilling of land	880	7th April 1863	James Howard. Edward Tenney Bousfield. John Pinney.
Improved machinery for boring rocks and other hard substances.	903	9th April 1863	George Low.
Machinery for hammering, rolling and shaping metals.	924	13th April 1863	John Ramsbottom.
Construction of machinery or apparatus for cutting chaff and other agricultural produce	927	13th April 1863	Robert Leggett. Robert Gittus.
Machinery for opening, cleaning, carding and grinding or sharpening cards used in preparing cotton and other fibrous materials	932	13th April 1863	Thomas Mallinson. Peter Williams.
An improved construction of shuttle driver and apparatus for working the same	961	16th April 1863	Thomas Alfred William Clarke.
Manufacture of felted fabrics	970	17th April 1863	Cornelius Turner.
Apparatus for transmitting, equalizing and registering human power	997	21st April 1863	William Ryan. William Daniel.
Improvements in reaping and mowing machines, part of which improvement is applicable to other useful purposes.	1001	22nd April 1863	Theodore Grace.
Machinery for spinning and doubling	1013	23rd April 1863	Peter M'Gregor.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PROPELLING, &c.—*continued.*			
Machinery for sewing and stitching - -	1016	24th April 1863	William Newton Wilson. James Graham Grey.
Lawn mowing, rolling and collecting machines -	1022	24th April 1863	John Cornes. John Coope Davis.
Pulleys, capstans and other machines for raising weights and transmitting motive-power -	1032	25th April 1863	Thomas Aldridge Weston. Charles Vivian.
Machinery or apparatus for making ices - -	1040	25th April 1863	Alexandre Legras.
Improvements in the manufacture of and in the machinery and appliances for holding, drilling, turning, tapping, fitting and shaping certain parts of steam, water, gas and lamp fittings.	1041	25th April 1863	John Thomas Stroud.
Improvements in threshing machines, part of which improvements are also applicable for hulling, decorticating, cleaning and polishing grains and seeds. (*Communicated by Aristide Barbier and Nicolas Edouard Daubrée.*)	1042	25th April 1863	William Edward Newton.
Certain improvements in carding-engines to be employed for carding cotton and other fibrous substances.	1070	28th April 1863	Richard Butterworth.
Improvements in cotton gins and in the method of driving the same, part of which improvements is applicable to other purposes - - -	1079	29th April 1863	Evan Leigh. Frederick Allen Leigh.
Machinery or apparatus for winding cotton, silk, wool or other threads on spools or reels.	1087	30th April 1863	John Wibberley.
Improvements in welding and rolling metals and in machinery connected therewith. (*Communicated by Michel Helson.*)	1091	30th April 1863	Edward Griffith Brewer.
Improved apparatus for fulling woollen cloths and washing and cleansing woven fabrics.	1097	1st May 1863	William Clissold.
Machinery for punching, stamping or forging metals.	1103	2nd May 1863	George Burt.
Improvements in sewing-machines and in apparatus connected therewith.	1126	5th May 1863	Samuel Beach Cochran.
Communicating motion to machinery for manufacturing paper pulp.	1138	7th May 1863	James Park.
Construction of mechanism applicable to looms and partly to carding-engines and other machinery. (*Cranks.*)	1141	7th May 1863	John Walker.
Machinery for feeding slivers of wool and other material to carding-engines - - -	1153	8th May 1683	Charles Lloyd Braithwaite. Joseph Hirst.
Grass mowing and reaping machines - -	1188	12th May 1863	William Mattison. George Barker.
Machinery for preparing, dressing and winding cotton, woollen, flax, silk and other warps. (*Communicated by Pierre François Dacheux and Gustave Lefebvre.*)	1197	12th May 1863	Richard Archibald Brooman.
Sewing-machines - - - - -	1212	14th May 1863	Alexander Pilbeam.
Improvements in machinery or apparatus for grinding, crushing, cleaning and hulling or shelling various kinds of farm or vegetable produce, also applicable to the crushing or grinding of minerals and other substances.	1226	15th May 1863	John Patterson.
Machinery for working of wood - - -	1267	20th May 1863	John Thurgood Markall.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PROPELLING, &c.—*continued.*			
Machinery or apparatus for roving, spinning and doubling cotton and other fibrous materials	1290	22nd May 1863	James Higgins. Thomas Schofield Whitworth.
Steam hammers	1292	23rd May 1863	John Sturgeon.
mprovements in means of and apparatus for preparing, spinning, twisting and doubling wool, cotton and other fibrous substances, and in lubricating the spindles and other parts of machinery used in these and other operations.	1318	25th May 1863	Martyn John Roberts.
An improved machine or apparatus for getting coal or other minerals	1319	25th May 1863	John Watson Burton. Samuel Gibson Rhodes. Samuel Oxley Seanor. William Scruton.
Improvements in apparatus for boring, mining, and excavating or cutting, in motive-power engines, and in pressure gauges	1322	26th May 1863	James Munro. Robert Scott.
Apparatus for the transmission of motive-power (*Communicated by Thomas Luders.*)	1357	30th May 1863	Edward Thomas Hughes.
Double moulding or ridging ploughs	1372	2nd June 1863	James Mellard.
Machinery to be worked by steam or other power for clearing and ploughing land.	1379	2nd June 1863	Etienne Joseph Jarry.
Machines for "ginning" cotton (*Communicated by Jules Alfred Chaufourier.*)	1387	3rd June 1863	George Davies.
Implements to be used in the cultivation of the soil.	1404	5th June 1863	Joseph Seaman.
Construction of and mode of working hydrostatic presses and hydraulic apparatus.	1439	9th June 1863	Henry Bessemer.
An improved pneumatic hammer, useful also for stamping and punching metals.	1457	11th June 1863	William Walton.
Machinery for burring, ginning, cleaning and carding cotton and other fibrous substances	1465	12th June 1863	Francis Alton Calvert. Francis Calvert.
Harvesting machines	1503	16th June 1863	William Manwaring.
Machinery for making moulds to be employed when casting metal.	1530	18th June 1863	Robert Jobson.
An improved machine for making bolts, rivets and spikes.	1531	18th June 1863	Edward Gossiaux.
Machinery for the manufacture of bolts and rivets (*Communicated by Jacques Victor Gauthier.*)	1536	19th June 1863	Henri Adrien Bonneville.
Sawing machinery	1547	20th June 1863	Robert Brownlee.
Reaping machines	1574	22nd June 1863	Charles Thomas Burgess.
Improvements in slubbing, intermediate and roving frames, in the throstles and winding machines used for the manufacture of cotton or other fibrous materials	1577	23rd June 1863	James Ellison. Abraham Rogerson.
Construction of sewing machines (*Communicated by Richard Mott Wanzer.*)	1605	25th June 1863	Henry Clay Lee.
Machinery for stretching and drying fabrics (*Communicated by Alexandre Fortuné Tulpin.*)	1608	26th June 1863	Alfred Tulpin.
Looms for weaving (*Guiding pickers.*)	1616	27th June 1863	William Bradshaw. James Bradshaw.
Lithographic and zincographic presses	1629	30th June 1863	Charles Henry Gardner.
A new and useful machine for preparing cotton, wool or other fibrous material. (*Communicated by Cullen Whipple.*)	1643	1st July 1863	George Tomlinson Bousfield.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PROPELLING, &c.—*continued.*			
An improved sowing and harrowing machine -	1672	6th July 1863	Andrew Gower. Benjamin Smyth Gower.
Brick machines - - - - - - (*Communicated by Isaac Gregg.*)	1692	8th July 1863	George Haseltine.
Improvements in lever horse power machines, the cog gearing employed being applicable to other machines. (*Communicated by Cyrus Averÿ.*)	1701	8th July 1863	George Haseltine.
Improvements in traction engines and in apparatus for ploughing and tilling land by steam and other power, part of which improvements is also applicable to driving or giving motion to machinery - - - - -	1726	10th July 1863	Richard Hornsby, junior. John Bonnall. William Astbury.
Threshing and dressing machines - -	1758	14th July 1863	James Holmes. George Thomas Holmes. Frederick Robert Holmes.
Certain improvements in machinery or apparatus for roving and spinning wool, cotton and other fibrous substances.	1768	15th July 1863	Thomas Wimpenny.
Improvements in revolving shutters and blinds, and in apparatus for the manufacture of the same.	1803	18th July 1863	Alexander Clark.
Machinery for rolling hoops and tyres - -	1832	22nd July 1863	Peter Rothwell Jackson.
Certain improvements in preparing, beetling or finishing textile fabrics, such as cotton, wool, linen or other fibrous materials - - -	1845	23rd July 1863	William Garforth. James Garforth.
Certain improvements in machinery or apparatus for giving motion to "dobby horses," "flying and swinging boats," or similar apparatus used for public amusement.	1907	1st Aug. 1863	Thomas Bradshaw.
Self-acting mules for spinning - - -	1912	3rd Aug. 1863	Edward Alfred Cowper.
Machinery or apparatus for feeding wool, cotton and other fibrous materials into machines for preparing the same for spinning.	1927	4th Aug. 1863	Thomas Pickersgill.
Engines for carding cotton and other fibrous materials - - - - - - -	1959	7th Aug. 1863	John Thompson. Edward Gerrard Fitton. Frederick Alexander Fitton.
Certain improvements in machinery for preparing, spinning and doubling cotton and other fibrous substances - - - - -	1976	11th Aug. 1863	William Knowles. Robert Halliwell.
Means or apparatus for actuating rotary shuttle boxes.	1977	11th Aug. 1863	David Wright Barker.
An improved equilibrium saw frame - -	1979	11th Aug. 1863	William Blackett Haigh.
Improvements in certain parts of reaping machines and in the working or application of the same.	1984	11th Aug. 1863	William Gray.
Improved apparatus for printing - - - (*Communicated by Benjamin Livermore.*)	2031	15th Aug. 1863	Alfred Vincent Newton.
Machinery for finishing woven fabrics - -	2036	17th Aug. 1863	John Smith.
Machinery for sawing wood and other fibrous substances.	2064	19th Aug. 1863	Richard Hughes Jackson.
Machinery for planing curved, curvilinear, irregular and other forms in iron, steel and other metals.	2077	21st Aug. 1863	Robert Thompson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PROPELLING, &c.—*continued*.			
Obtaining and applying motive-power - - (*Communicated by Pierre Gardere and Charles Patek.*)	2114	26th Aug. 1863	John Henry Johnson.
Improvements in and applicable to cotton gins -	2133	29th Aug. 1863	George Lowry.
Improved machinery for sawing irregular forms of wood. (*Communicated by Henry Vrooman.*)	2152	31st Aug. 1863	Alfred Vincent Newton.
Hydraulic apparatus - - - - (*For actuating machinery.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Improvements in machines for crushing hard substances, for washing ores and minerals, and for separating earth and earthy matter from solid substances.	2172	2nd Sept. 1863	Frederick Charles Phillip Hoffmann.
Machinery for preparing and spinning cotton and other fibrous substances - - - -	2197	7th Sept. 1863	Frederick Mills. Thomas Booth. Thomas Clegg.
Improved apparatus for directing motion in right lines. (*Communicated by Andrew Buchanan and William Alexander Righter.*)	2201	7th Sept. 1863	Alfred Vincent Newton.
Improvements in machinery for morticing, drilling, dovetailing and cutting wood, and in tools to be used for morticing - - - - -	2202	7th Sept. 1863	Samuel Gerish. John Weston.
Certain improvements in apparatus for preparing cotton and other fibrous materials for spinning.	2215	9th Sept. 1863	William Higgs Hawksworth.
Machinery or apparatus for winding yarns or thread	2233	10th Sept. 1863	Matthew Andrew Muir. James M'Ilwham.
Manufacture of felted fabrics - - -	2235	10th Sept. 1863	James Heywood Whitehead.
Improvements in the manufacture of iron rods and in machinery to be employed in the said manufacture.	2237	11th Sept. 1863	William Taylor.
Certain improvements in mules for spinning cotton and other fibrous substances.	2307	19th Sept. 1863	John Buckley.
Machinery or apparatus for making bricks, tiles or slabs and other such articles.	2318	19th Sept. 1863	James Farmer. Charles Hadfield.
Apparatus for loading and unloading vessels, and raising, lowering and otherwise conveying sacks, casks, agricultural produce and other objects, from one locality to another.	2326	21st Sept. 1863	Richard Wallis.
Apparatus for giving a reciprocating motion to picks and cutting tools used in getting coal and other minerals and stone - - - -	2327	21st Sept. 1863	Robert Ridley. James Grafton Jones.
Power-looms for weaving hair cloth and fabrics in which the weft is inserted in separate lengths of material. (*Communicated by Charles Bradley.*)	2328	21st Sept. 1863	George Tomlinson Bousfield.
Reaping machines - - - - -	2329	21st Sept. 1863	Charles Thomas Burgess.
Machinery or apparatus for making bricks, tiles, pipes and other similar articles.	2335	22nd Sept. 1863	Peter Effertz.
Improvements in instruments for tilling the soil, and in means of drawing ploughs and other implements for tilling through the land.	2351	24th Sept. 1863	William Woofe.
Machinery for cutting and boring coal and rocks -	2357	24th Sept. 1863	John Sturgeon.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PROPELLING, &c.—*continued.*			
Perforating machines - - - (*Varying gauge.*)	2496	12th Oct. 1863	John Heap.
Improvements applicable to metallic casks and in machinery for the manufacture of the same.	2498	12th Oct. 1863	Thomas Browning.
Improvements in machinery for rolling, shaping or forging metals, and in apparatus for grinding and polishing the same.	2506	13th Oct. 1863	James Dodge.
Cotton gins - - - - - -	2511	13th Oct. 1863	Thomas Cowell Craven.
Apparatus used for hauling agricultural implements	2513	13th Oct. 1863	John Fowler.
Looms for weaving - - - -	2519	14th Oct. 1863	James Milton.
Improved apparatus for boring and cleaving stone -	2531	16th Oct. 1863	James Polglase. Jonathan Cox.
Machinery for bending plates for iron ships and other like purposes - - - -	2574	20th Oct. 1863	George Heaton Daglish. Thomas Windus.
Machinery for carding cotton and other fibrous materials - - - - -	2584	21st Oct. 1863	Thomas Hodson. William Nightingale. Robert Laird.
Mules for spinning and doubling - - -	2590	21st Oct. 1863	John Dodd.
Machinery or apparatus for punching, shearing and burnishing - - - -	2595	22nd Oct. 1863	John Craven. Samson Fox.
Improvements in preparing and cleansing vegetable fibres, and in machinery employed therein.	2605	22nd Oct. 1863	Charles James Pownall.
Driving the spindles of doubling and spinning frames.	2616	23rd Oct. 1863	Joseph Thomas Webster.
Machinery for drilling, boring or excavating rock or other earthy substances.	2624	24th Oct. 1863	Edward Smith Crease.
Improvements in the working and mining of coals, minerals and earthy matters, and in the machinery, apparatus and means to be employed therein - - - - - -	2630	24th Oct. 1863	William Locke. John Warrington. William Elliot Carrett. William Ebenezer Marshall. John Telford.
Doubling and winding machines - - -	2656	27th Oct. 1863	Robert Smith.
Machinery for cutting and boring coal, stone or other minerals - - - -	2659	27th Oct. 1863	William Firth. Samuel Firth. John Sturgeon.
Digging machinery - - - -	2676	29th Oct. 1863	Ormrod Coffeen Evans.
Reaping and mowing machines - - -	2695	30th Oct. 1863	John Brigham. Richard Bickerton.
Improvements in the making of safety paper and in the machinery or apparatus employed therein.	2700	31st Oct. 1863	William Tasker the younger.
Sewing-machines - - - - -	2713	3rd Nov. 1863	Thomas Wright Alderton.
Steam hammers - - - - - -	2715	3rd Nov. 1863	David Davy, junior.
Machinery for ruling or marking leather - -	2717	3rd Nov. 1863	Ralph Eaton.
Sewing-machines - - - - -	2727	4th Nov. 1863	Elias Howe, junior.
Improvements in self-acting machinery or apparatus worked by steam or other power for cutting and shaping the soles and heels of boots and shoes, and screwing them on to the uppers or coverings, and also in vices for holding the same, and tools for paring, blacking and glazing or otherwise ornamenting the edges of the soles and heels - - - - - -	2755	6th Nov. 1863	Charles Henry Southall. Robert Heap.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PROPELLING, &c.—*continued.*			
Improvements in machinery for ginning and cleaning cotton, a part of which are applicable to machines for other purposes.	2765	7th Nov. 1863	Horace Leeman Emery.
Sawing machines	2782	9th Nov. 1863	William John Cunningham. Herbert Connop.
Apparatus for grinding cards used in carding-engines	2795	10th Nov. 1863	Samuel Faulkner. John Berry. George Harrison.
Carding-engines	2796	10th Nov. 1863	Samuel Faulkner.
Improvements in machinery for finishing or beetling woven fabrics, which improvements are also applicable to fulling machines.	2799	11th Nov. 1863	John Smith.
Improvements applicable to machinery for opening, cleaning, preparing and carding wool and other fibrous substances.	2808	11th Nov. 1863	William Clissold.
Certain improvements in machinery for spinning and doubling.	2828	13th Nov. 1863	William Robertson.
Machinery for beetling and finishing cloth	2829	13th Nov. 1863	William Chambers.
Mules for spinning and doubling	2833	13th Nov. 1863	John Dodd Eli Spencer.
Looms for weaving	2834	13th Nov. 1863	John Wallace Drummond.
Apparatus and parts of sewing-machines (*Communicated by Jean Louis Thenen.*)	2845	14th Nov. 1863	Edward Thomas Hughes.
Presses for lithographic and other printing (*Communicated by Jean Theodore Dupuy.*)	2856	14th Nov. 1863	Richard Archibald Brooman.
Machinery for pulverising and cleaning the soil and scattering seed, guano, bone dust and other substances thereon.	2861	14th Nov. 1863	John Walmsley.
Method of driving and feeding cotton gins, and of conveying away the ginned cotton and seeds therefrom	2863	16th Nov. 1863	Evan Leigh. Frederick Allen Leigh.
Machinery for preparing cotton to be spun	2906	19th Nov. 1863	Richard Walker. John Scholes Brown. Benjamin Brown.
Machinery for ginning cotton and for opening cotton and other fibrous substances	2915	20th Nov. 1863	Benjamin Dobson. Edward Barlow. Peter Knowles.
Machinery and apparatus for cultivating land (*Hauling ploughs.*)	2948	23rd Nov. 1863	James Platt.
Improvements in driving sewing machines, which improvements are also applicable for driving other machinery.	2955	24th Nov. 1863	James Lewis.
Machinery for breaking and cleaning flax, hemp and other fibre yielding plants. (*Communicated by James Edward Mallory and Gelston Sanford.*)	2958	24th Nov. 1863	William Edward Newton.
Certain improvements in machinery for cutting and boring coal, stone or other minerals	3066	7th Dec. 1863	William Firth. Samuel Firth. John Sturgeon.
Looms for weaving	3090	8th Dec. 1863	Robert Harrowby. Jeremiah Foulds. Alfred Harrowby.
Machinery for puddling iron and steel	3093	8th Dec. 1863	Thomas Harrison.
Reaping and mowing machines (*Communicated by William Anson Wood.*)	3095	8th Dec. 1863	William M'Intyre Cranston.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PROPELLING, &c.— *continued.*			
Improvements in presses for bending metal plates into the various forms required in naval architecture and for other purposes - - (*Communicated by John Cochrane.*)	3110	10th Dec. 1863	William Galloway. John Galloway.
Centrifugal machines for extracting the syrups from sugar.	3123	11th Dec. 1863	John Corby.
Improvements in engines for hauling agricultural implements, and also in traction engines.	3126	11th Dec. 1863	Thomas Webb.
Apparatus for transmitting motive-power - -	3129	11th Dec. 1863	John Cliff.
Certain improvements in machinery for carding cotton and other fibrous substances - -	3139	12th Dec. 1863	Benjamin Dobson. John Hodgkinson. Daniel Greenhalgh. Francis Hamilton.
Preparation of clay for the manufacture of bricks, tiles and other articles which may be made of such material - - - -	3145	12th Dec. 1863	John Platt. William Richardson.
Calendering machines - - - - (*Communicated by Jules Auguste Lequeux Muston.*)	3153	14th Dec. 1863	William Spence.
Certain improvements in sewing machinery - (*Communicated by Isaac Merrit Singer.*)	3181	16th Dec. 1863	Alfred Vincent Newton.
Certain improvements in machinery for opening and scutching cotton and other fibrous substances.	3201	19th Dec. 1863	William Noton.
Machines for sewing and stitching - - - (*Communicated by Richard Mott Wanzer.*)	3211	19th Dec. 1863	Charles Tiot Judkins.
Applying power to windlass and other barrels used for raising and lowering weights. (*Communicated by E. B. Requa.*)	3282	28th Dec. 1863	John Baldwin Cronin.
Improvements in apparatus for obtaining motive-power applicable to the working of pumps and other machinery.	3288	29th Dec. 1863	James Price.
Apparatus used when giving motion to sewing-machines by straps or bands.	3292	29th Dec. 1863	James Cumming.
For Driving-bands, *see* "STRAPS." For Adjusting Firearms, *see* "FIREARMS."			
PUMPS; PUMPING AND RAISING WATER AND OTHER LIQUIDS; PUMP PISTONS AND PACKINGS; SHIPS' PUMPS; TURBINES.			
Improvements in screw and paddle propellers and a submarine propeller, also applicable to the raising and forcing of water or other fluids.	98	12th Jan. 1863	Arthur Irwin Mahon, C.E.
Improvements in obtaining reciprocating motion in steam-engines, and for communicating the same to any ordinary pumps for whatever purpose they may be employed.	166	20th Jan. 1863	Alfred Paul.
Improved hydraulic machinery for raising water in mines, wells and other places - -	169	20th Jan. 1863	William Mawson. James Whitehead.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PUMPS, &c.—*continued.*			
Rotatory engines	253	28th Jan. 1863	James Platt.
An improved injector or apparatus for feeding boilers with water (*Or force pumps.*)	304	3rd Feb. 1863	Joseph Fletcher. Henry Bower.
Pumps	421	16th Feb. 1863	William Jackson.
Apparatus for raising sewage and water	470	20th Feb. 1863	William Husband. Joseph Quick.
Improvements in obtaining and applying motive-power, which improvements or parts thereof are applicable for raising, forcing and measuring fluids.	512	24th Feb. 1863	Robert William Thomson.
Improvements in pumping and forcing water, and in apparatus for the same. (*Communicated by Barthelemy Louvié.*)	559	27th Feb. 1863	William Clark.
Steam-engines	622	5th March 1863	William Jackson. Richard Watkins.
Improved machinery for obtaining and applying motive-power. (*For raising liquids.*)	653	9th March 1863	Pierre Hugon.
Valves (*For pumps.*)	691	14th March 1863	William West.
Apparatus for generating carbonic acid (*For raising liquids.*)	732	18th March 1863	Auguste Morel.
Certain apparatus for injecting and ejecting fluids	744	20th March 1863	Andrew Barclay. Alexander Morton.
Apparatus for transmitting, equalising and registering human power (*For driving pumps.*)	997	21st April 1863	William Ryan. William Daniel.
Improvements in the construction of garden pumps, part of which said improvements are applicable to fire-engines and other hydraulic machines	1107	2nd May 1863	John Thomas Oakley. Thomas Oakley.
Pumps	1123	5th May 1863	Joseph Henry Knott.
Improvements in obtaining motive-power, which improvements are applicable in part for raising or forcing fluids into steam-boilers, tanks and other vessels.	1160	9th May 1863	William Thomson.
Improvements in motive-power machinery especially adapted for raising and forcing water and other liquids or fluids, parts of said improvements being applicable to steam-engines and other machines fitted with pistons.	1239	16th May 1863	James Whitehead.
Apparatus for raising, forcing and moving fluids (*Communicated by Louis Coignard.*)	1324	26th May 1863	Michael Henry.
Certain improvements in apparatus for feeding or supplying water to steam-boilers	1383	2nd June 1863	William Gleave. Thomas Young.
Steam fire-engines (*Communicated by Joseph Garnett Larned.*)	1388	3rd June 1863	Wellington Lee. John Gano Winter.
Construction of and mode of working hydrostatic presses and hydraulic apparatus.	1439	9th June 1863	Henry Bessemer.
Improvements in steam fire-engines, parts of which improvements are applicable to steam-boilers and to pumps generally.	1474	12th June 1863	Henry Stracey Barron.
Improved apparatus for feeding steam-boilers with water, which apparatus is also applicable for raising water.	1488	13th June 1863	Henry Graham William Wagstaff.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PUMPS, &c.—*continued.*			
Certain improvements in engines for obtaining motive-power from steam or other liquid, also partly applicable to pumps. (*Communicated by John Benjamin Root.*)	1499	15th June 1863	William Clark.
Steam-engines (*For pumping.*)	1510	16th June 1863	William Neill, junior.
Improvements in the method and construction of a packing chiefly applicable to piston rods, pumps and such like, and for forming the joints of gas, steam or water pipes.	1597	25th June 1863	Abraham Ripley.
Turbines	1681	7th July 1863	Christian Schiele.
A new description of hydraulic engine for raising water and other fluids above their common level, the fluids so raised to be used as a motive-power	1706	9th July 1863	James Smith. Sydney Arthur Chease.
Hydraulic engines	1712	9th July 1863	Pery Graham Buchanan Westmacott.
Construction of force pumps	1893	31st July 1863	George Sigl.
An improved rotary pump	1975	11th Aug. 1863	Edward Myers. Hugh Forbes.
Fans, pumps and machinery for propelling air, fluids or other substances by centrifugal force.	2008	14th Aug. 1863	Christian Schiele.
Hydraulic apparatus (*See* "PRESSES.") (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
A new or improved engine for raising liquids	2175	3rd Sept. 1863	André Alexandre Beaumont.
Pneumatic motive-power machinery	2289	17th Sept. 1863	James Whitehead.
Portable fire and garden engines	2321	21st Sept. 1863	William Burnet Robins.
Improvements in machinery applicable to steam and water engines (as motors), which machinery is also applicable to lift and force pumps.	2341	23rd Sept. 1863	James Platt.
Rotary engines worked by steam, water or other motive-power (*Turbine wheels.*)	2429	5th Oct. 1863	William Hoehl. Christopher Brakell. William Günther.
Motive engines worked by water, steam or other motive-power (*Turbine wheels.*) (*Partly communicated by Albert Westfield.*)	2430	5th Oct. 1863	Christopher Brakell. William Hoehl. William Günther.
Apparatus to be used for pumping water out of mines and other places.	2448	7th Oct. 1863	Edward Jones.
Pumps (*Communicated by Walter Davies Sperry.*)	2454	7th Oct. 1863	Charles Pomeroy Button.
Improved apparatus for boring and cleaving stone (*Boring for water.*)	2531	16th Oct. 1863	James Polglase. Jonathan Cox.
Pumps to be worked by steam (*Communicated by Guillaume Samuel Dobbs.*)	2533	16th Oct. 1863	Richard Archibald Brooman.
Governors	2581	21st Oct. 1863	Christian Schiele.
Steam-engines (*For pumping.*)	2588	21st Oct. 1863	Zerah Colburn.
Obtaining motive-power by certain arrangements of machinery and water.	2652	27th Oct. 1863	Edmond Gibson Atherley.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PUMPS, &c.—*continued*			
Improvements in machinery for raising and forcing fluids, parts of which improvements are also applicable to steam-engines, blast engines, exhausters and other machines.	2707	31st Oct. 1863	Stephen Holman.
Certain apparatus for injecting and ejecting fluids (*Raising and forcing.*)	2775	7th Nov. 1863	Andrew Barclay. Alexander Morton.
An improved machine adapted for performing various mining operations, such as working or cutting coal or other analogous substances in mines, forcing water from mines and air thereunto - - - - - - -	2788	9th Nov. 1863	Ralph Henry Philipson. John Dees.
Improvements in machinery or apparatus for measuring and registering fluids, and in obtaining motive-power from the same. (*Turbines.*)	2790	10th Nov. 1863	John Ramsbottom.
Hydraulic apparatus for hoisting, lifting and pressing.	2953	24th Nov. 1863	Christian Schiele.
Improvements applicable to ships' and other lift pumps.	2968	25th Nov. 1863	John Hays Wilson.
Apparatus for raising and forcing fluids - -	2975	26th Nov. 1863	Jean Nadal.
Improvements in steam apparatus for raising and forcing water, applicable to steam navigation and waterworks in general.	3162	15th Dec. 1863	Victor de Stains, B.A.
Construction of rotary pumps - - -	3180	16th Dec. 1863	Edward Myers. Henry Dundas Gloag.
Improved apparatus for racking and decanting liquids (termed "Laburthe's Apparatus.") (*And raising water.*) (*Communicated by Clèment Laburthe.*)	3206	19th Dec. 1863	William Edward Gedge.
An improved method of feeding locomotive and other boilers applicable also to the raising of water and other liquids - - - -	3220	21st Dec. 1863	Edward Wilson. George Lindsley.
Hydraulic pumps - - - -	3237	22nd Dec. 1863	Frederick Hazeldine.
An improved pneumatic apparatus for filling barrels used for watering roads and other purposes.	3285	29th Dec. 1863	Louis Edouard Desestre.
Improvements in apparatus for obtaining motive-power applicable to the working of pumps and other machinery.	3288	29th Dec. 1863	James Price.
PURSES AND FASTENINGS.			
An improved fastening for purses, portemonnaies, pocket-books, bags, reticules and such like purposes.	383	12th Feb. 1863	Samuel Henry Phillips.
Pocket-books, purses, wallets, and bill cases -	792	26th March 1863	William Johnson.
Manufacture of covers for purses, wallets and pocket-books - - - - - -	1856	25th July 1863	George Henry James. James Marshall James. Josiah James.
Fastenings for cigar cases, portemonnaies, bags and other like articles.	1909	1st Aug. 1863	Edmund Sutton.
Locks or fastenings - - - - (*For portemonnaies.*)	2013	14th Aug. 1863	Frederick John Jones.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
PURSES, &c.—*continued.*			
Improvements in the manufacture of purses, pocket-books and wallets, and in the construction of double-action locks for the same and other similar purposes.	2565	20th Oct. 1863	James Michaelis.
An improvement in clasps for portemonnaies, pocket-books, bags and other like uses. (*Communicated by Paul Claparede.*)	2666	28th Oct. 1863	Henri Adrien Bonneville.
Improvements in the manufacture of purses, bags and other similar articles, and in fastenings for the same. (*Communicated by Ignatz Lindenblith.*)	3280	28th Dec. 1863	William Clark.
RAGS AND WASTE; SEPARATING FIBRES FROM FABRICS.			
Improvements in the method of and apparatus for preparing materials for the manufacture of paper and similar purposes, part of the invention being also applicable to other operations in which materials are subjected to the action of hot agents.	1	1st Jan. 1863	Robert Hanham Collyer, M.D., F.C.S.
Manufacture of fibrous material for cleansing machinery and other purposes.	64	7th Jan. 1863	Henry Harben.
Machinery for opening twisted yarns and woven fabrics. (*Waste breaking machine.*)	671	11th March 1863	James Tomlinson.
Treatment of rags and obtaining valuable chemical products from the animal fibre therein.	731	18th March 1863	William Lorberg.
Bleaching jute fibre - - - - (*Or rags.*)	780	25th March 1863	George Stuart.
Rag machines - - - - - -	806	27th March 1863	James Dixon Asquith. George Greenwood.
Machinery for washing and drying wool and other fibres and rags, also in tentering, stretching and drying fabrics.	890	8th April 1863	James Lee Norton.
Machinery for separating and straightening the fibres of silk waste and other fibrous substances.	930	13th April 1863	Robert Newton.
Improvements in the means or apparatus employed for recovering the fibres of wool from fabrics or materials composed of wool combined with cotton or other vegetable substances.	1075	29th April 1863	John Rowley.
Communicating motion to machinery for manufacturing paper pulp.	1138	7th May 1863	James Park.
Paper-makers' rag or pulp engines - - -	1206	13th May 1863	Benjamin Lambert.
Improvements in treating floss silk and silk waste, and in apparatus for the same and other like purposes. (*Communicated by Charles Torne, fils.*)	1451	11th June 1863	Michael Henry.
Treatment and preparation of materials for the manufacture of paper. (*Separating fibres from mixed fabrics.*)	1652	3rd July 1863	Charles Martin.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
RAGS, &c.—*continued.*			
Machinery for opening, carding and cleaning cotton and other fibrous materials when in a manufactured or partly manufactured state. (*Waste.*)	1811	20th July 1863	Thomas Knowles.
Means of utilising refuse azoted matters of commerce for the manufacture of various chemical products. (*Communicated by Amédée Gélis and Lucien Dusart.*)	2222	9th Sept. 1863	William Clark.
Treatment of rags and obtaining valuable chemical products from the animal fibre therein.	2294	18th Sept. 1863	William Lorberg.
Boiling rags and other paper-making materials -	2520	14th Oct. 1863	William Jackson Rideout.
Treatment of vegetable fibres for the production of paper pulp or half stuff therefrom.	2931	21st Nov. 1863	Ferrar Fenton.
Improvements in machinery for amalgamating or intermixing dry, semifluid or aqueous materials, and for agitating solids with liquids, for combining, dissolving or washing the same. (*Washing rags for paper makers.*)	2947	23rd Nov. 1863	Thomas Carr.
A new method of discharging color from rags used for paper-making or other purposes, and in treating of vegetable fibres by such process.	2980	27th Nov. 1863	Thomas Gray.
An improved rag machine cylinder or swift and tooth of an improved principle, for the purpose of pulling up woollen and cotton rags, silk rags, hair bagging, and for cleaning and opening wools and waste, and for the pulling up of fibrous substances in the rag - - - -	3113	10th Dec. 1863	Alexander Reid. George Rydill.
Improvements in the knives used for the cylinders and blocks of rag cutting or beating engines, the same arrangement of knives being also applicable to the crushing or beating of other substances. (*Communicated by F. Meyer.*)	3238	22nd Dec. 1863	William Edward Gedge.
Improvements in and apparatus for the conversion of ropes and other cordage into oakum, tow and paper stuff, parts of which are applicable to teasing and cleaning wool or hair on skins, and dressing "waste" tow, wool, hair and other "waste" fibres.	3246	23rd Dec. 1863	James Ronald.
RAILWAYS AND RAILWAY CARRIAGES.			
I.—Permanent Way, Rails, Rail-joints, Chairs and Sleepers; Portable Railways, Atmospheric Railways, Tramways.			
Permanent way of railways - - - (*Communicated by Alcide Louis Joseph Huber.*)	65	7th Jan. 1863	John Henry Johnson.
Improvements in apparatus to be used on railways to indicate to the engine-driver of a carriage train the length of time which has intervened since the passing of a previous train. (*See* "SIGNALS.")	189	21st Jan. 1863	Sir Coutts Lindsay.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
RAILWAYS, &c.—*continued.*			
Construction of sidings and loop lines for railways or tramways whether portable or otherwise.	196	22nd Jan. 1863	John Grant.
Working railway engines and carriages on steep inclines. (*See* "PROPELLING.")	227	26th Jan. 1863	John Barraclough Fell.
An improved railway chair and joint for rails on railways.	236	27th Jan. 1863	Charles Askew.
Improvements in preserving timber and in apparatus employed therein. (*Railway sleepers.*) (*Communicated by Etienne Marechal.*)	243	28th Jan. 1863	Henry Bernoulli Barlow.
Improvements in the construction of underground railways or subways, and in carriages to be used or worked therein - - - - -	557	27th Feb. 1863	Arthur Dudgeon. George Frederick Lee Meakin. Edward Ellis Allen.
Improved apparatus for opening and closing the gates of railway crossings, which apparatus also acts simultaneously upon the signals.	651	9th March 1863	Charles Henry Lea.
Improvements in making moulds for casting and in apparatus connected therewith - - (*Railway sleepers.*)	846	2nd April 1863	John Warren Law. John Inglis.
Means of fastening rails for railways - - (*Chairs and keys.*)	847	2nd April 1863	Edwin Francis Clarke.
Apparatus for the transport of goods - - (*Communicated by Paulin Gay.*)	946	15th April 1863	William Clark.
An improved mode and apparatus for distributing sand or any other suitable substance or substances on the rails of railways and tramways -	1007	23rd April 1863	John William Proffitt. William Lundi Duncan.
Railway permanent way - - -	1009	23rd April 1863	Robert Richardson.
Improvements in making moulds for casting and in apparatus therefor. (*Casting sleeper chairs.*)	1164	9th May 1863	James Norie.
A new wrought iron railway sleeper - - (*Communicated by Jean Arthur Granet.*)	1180	11th May 1863	Charles Louis Van Tenac.
Permanent way of railways - - -	1250	19th May 1863	John Edwards.
Improvements in the means of transmitting power on railways worked by vacuum or the pressure of air, and in the apparatus to be employed for such purpose.	1269	21st May 1863	George Rogers Harding
Improvements in apparatus for boring, mining and excavating or cutting, in motive-power engines, and in pressure gauges. (*Cuttings for railways.*)	1322	26th May 1863	James Munro. Robert Scott.
Rails for railways - - - - (*Communicated by Gabriel Dümler.*)	1350	29th May 1863	William Loeder.
An indicator for railway trains - - - (*See* "MEASURING PROGRESS.")	1407	8th June 1863	William Armitage Brown.
Railway chairs and sleepers - - -	1432	9th June 1863	John Edwards.
Permanent way of railways - - - -	1441	10th June 1863	Russel Ai ken.
An improvement in railway wooden sleepers - (*Communicated by Jean Arthur Granet.*)	1454	11th June 1863	Charles Louis Van Tenac.
Construction and maintenance of the permanent way of railways.	1614	27th June 1863	Thomas Dunn.
Permanent way of railways - - -	1727	10th July 1863	William Edward Jones.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
RAILWAYS, &c.—*continued.*			
Improvements in the permanent way of railways and in supporting the rails thereof.	1730	10th July 1863	James Campbell.
Working of railways - - - -	1731	10th July 1863	Robert Hawthorn. William Hawthorn.
Construction of railways and tramways - -	1739	11th July 1863	Hugh Greaves.
Improvements in breakwaters and in the construction of rail and other ways thereon.	1777	15th July 1863	Dominique Tamet.
An improved apparatus for regulating the speed of trains on railways, and in assisting the locomotive engine and train in ascending and descending inclined planes. (*Communicated by Carl Schouberszky.*)	1846	23rd July 1863	Moritz Meisel.
Sleepers or supports for rails of railways - - (*Communicated by Marie Pouillet.*)	1866	27th July 1863	Richard Archibald Brooman.
A new application of rolled metal plates to the formation of railways, bridges, tramways and other structures.	1937	6th Aug. 1863	Joseph Emerson Dowson.
Improvements in fastening and in securing in position the rails of railways, the said fastenings being applicable for other uses.	1966	8th Aug. 1863	John Ward Armstrong.
Moulding or shaping metals - - - (*Railway chairs.*)	2211	8th Sept. 1863	James Deas Jack.
Permanent way of railways - - -	2280	17th Sept. 1863	John Edwards. James Livesey.
Improvements in railway telegraphs and signals, and also in the permanent way and carriages, for preventing railway accidents.	2332	21st Sept. 1863	Wilhelm Adolf Von Kanig.
Parts of the permanent way of railways - - (*Communicated by Narcisse Antoine Brocot and Aimé Labarre.*)	2390	29th Sept. 1863	William Edward Gedge.
Permanent way of railways - - - (*Communicated by Miguel de Bergue.*)	2461	7th Oct. 1863	John Henry Johnson.
Permanent way of railways - - -	2503	12th Oct. 1863	Russel Aitken.
Manufacture of rails for railways - - - (*Communicated by Thomas Shoenberger Blair.*)	2525	15th Oct. 1863	Peter Lesley.
Machinery for cutting railway sleepers to receive railway chairs.	2548	17th Oct. 1863	John Wright.
Permanent way of railways - - -	2556	19th Oct. 1863	Joseph Whitley.
Improvements in atmospheric railways and in carriages for the same.	2635	24th Oct. 1863	Alexander Alison.
Manufacture of wooden sleepers for railways -	2658	27th Oct. 1863	Mark William Carr.
Machinery for excavating land, making cuttings and other earthworks. (*For railways.*)	2710	2nd Nov. 1863	Florent Joseph Vandenvinne.
Permanent way of railways and fastenings for the same - - - - - -	2722	4th Nov. 1863	James Livesey. John Edwards.
Manufacture of railway bars - - -	2744	5th Nov. 1863	Henry Bessemer.
Atmospheric or pneumatic railways and locomotive engines to be used in connection therewith.	2830	13th Nov. 1863	George Remington.
Improvements in and applicable to moveable platforms for railway stations - - -	2881	18th Nov. 1863	William Pratchitt. John Blaylock. John Pratchitt.
Construction and working of railways - -	2906	19th Nov. 1863	William Symons.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
RAILWAYS, &c. — *continued.*			
Improved railway crossings adapted to the ordinary single or double headed rails - - - (*Bearing chairs.*)	3038	2nd Dec. 1863	Charles Cammell. Willoughby Crompton.
Permanent way of railways - - -	3122	11th Dec. 1863	Charles Seaton.
Improvements in railway engines, carriages and permanent way for steep inclines.	3182	16th Dec. 1863	John Barraclough Fell.
Atmospheric railways - - -	3191	18th Dec. 1863	Alexander Alison. James Halliwell.
Permanent way of railways - - - - (*Communicated by Charles Ferdinand Zorès.*)	3267	24th Dec. 1863	Richard Archibald Brooman.
Permanent way of railways - - -	3276	28th Dec. 1863	Jonathan Edwin Billups.
An improved apparatus to be attached to locomotive engines for the purpose of removing obstructions from railways - - -	3299	30th Dec. 1863	Maxime Charles Edouard Houdayer. Jules Jean Cormier.
II.—Railway Switches, Points, Crossings and Turntables.			
Improvements in indicating the positions or conditions of railway signals and points, and in the apparatus employed therein.	396	13th Feb. 1863	Samuel Whitaker.
Construction of the crossings of railways - -	627	5th March 1863	John Howie.
Improvements in working railway points, switches, and signals, and in the apparatus to be employed for that purpose.	809	28th March 1863	Archibald Hewison Perry.
Turntables, turnbridges and slips - -	984	20th April 1863	Ebenezer William Hughes.
Construction of turntables - - - (*Communicated by Signor Rombeaux.*)	1150	8th May 1863	Alexander Skwarcow.
Improvements in points and in crossings used on railways and on tramways.	1299	23rd May 1863	John Hopkins.
The construction of rail and road carriages and improved wheel tires, and an improvement in railway crossings adapting them to such carriages.	2320	21st Sept. 1863	William Elsdon.
Improved railway crossings adapted to the ordinary single or double headed rails - -	3038	2nd Dec. 1863	Charles Cammell. Willoughby Crompton.
A new methed of and apparatus for enabling the points on railways to be shifted by an attendant in the train, while the train is in motion.	3135	11th Dec. 1863	William Thomas Cassel Pratt.
III.—Railway Carriages; Coupling, Uncoupling and altering Position of Carriages and Engines.			
Couplings for railway carriages - - - (*Communicated by George Collyer.*)	282	30th Jan. 1863	William Edward Newton.
Improvements in the construction of underground railways or subways, and in carriages to be used or worked therein - - - -	557	27th Feb. 1863	Arthur Dudgeon. George Frederick Lee Meakin. Edward Ellis Allen.
Certain improvements in springs to be employed in the manufacture of beds, seats or for similar purposes where an elastic surface is required. (*For railway carriage seats.*)	619	5th March 1863	Robert Doyne Dwyer.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
RAILWAYS, &c.—*continued.*			
Apparatus for making certain indications in railway carriages. (*Name discs.*)	759	21st March 1863	Frank Applegate.
Railway carriage doors - - -	799	26th March 1863	Frank Applegate.
Construction of omnibuses, railway carriages and other vehicles.	837	1st April 1863	Joseph Bray.
Securing or connecting the bearing springs of railway carriages and wagons to the axle-boxes of the said carriages and wagons.	885	8th April 1863	John Nurthall Brown.
Improvements in or applicable to railway carriages to mitigate or lessen the effects of collisions to passengers.	918	11th April 1863	Walter Samuel.
Improvements in springs to be used for railway buffers, draw hooks, and also for carrying springs of railway carriages and other vehicles -	1102	2nd May 1863	John William Gibson. William Turner.
Springs for railway carriages and other purposes - (*Communicated by Richard Vose.*)	1113	4th May 1863	George Haseltine.
Manufacture of sheets, slabs and other articles when fibrous materials are employed. (*For railway carriages.*)	1158	8th May 1863	Charles Frederick Bielefeld.
Improvements in coupling and disconnecting carriages on railways, and in machinery employed therein. (*Communicated by Bartolomé Castellvi.*)	1183	11th May 1863	Richard Archibald Brooman.
Certain improvements in carriages and vehicles for railways and other roads.	1310	25th May 1863	Paul Leprovost.
Construction of railway carriages - -	1363	1st June 1863	James Henson.
Using Apo-elastikon hyphrasma as a new and improved cloth for floors, roofs, walls, tanks and other linings, being impervious to damp and of great strength and durability. (*For carriage tops.*)	1603	25th June 1863	William Kirrage.
Certain improvements in railway carriages - -	1753	14th July 1863	Louis Marcel Bournique. Jean Baptiste Vidard.
An improved waggon or truck to be used on railways - - - - - -	1754	14th July 1863	Louis Marcel Bournique. Jean Baptiste Vidard.
Improved means of preventing accidents upon railways.	2010	14th Aug. 1863	Robert Benjamin Greenwood.
Improvements in machinery for pressing cotton and for crushing and pressing other substances, the said machinery being adaptable for locomotion on railways or on common roads.	2056	18th Aug. 1863	Charles George Wilson.
Assistant bearing springs for locomotive engines, railway carriages, waggons and trucks.	2145	31st Aug. 1863	George Attock.
Arrangement or fixing of axles for railway and other carriages.	2155	31st Aug. 1863	Martyn John Roberts.
Construction of railway and other carriages -	2242	11th Sept. 1863	James Dobbie.
Apparatus applied to railway carriages and trains in order to obtain greater safety to passengers.	2285	17th Sept. 1863	John Gottlieb Ulrich.
Railway carriages and all other springed vehicles -	2297	18th Sept. 1863	John Mason Cook.
The construction of rail and road carriages and improved wheel tires, and an improvement in railway crossings adapting them to such carriages.	2320	21st Sept. 1863	William Elsdon.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
RAILWAYS, &c.—*continued.*			
Improvements in railway telegraphs and signals, and also in the permanent way and carriages, for preventing railway accidents.	2332	21st Sept. 1863	Wilhelm Adolf Von Kanig.
Improvements in apparatus for supplying gas to railway carriages and other moving structures, and in apparatus for manufacturing and holding gas in ships and other vessels, parts of such apparatus being also applicable for manufacturing and holding gas elsewhere - - - (*See* "GAS-BURNERS.")	2374	26th Sept. 1863	William Malam. William Tice.
Couplings for railway carriages - - -	2406	1st Oct. 1863	James Bell.
Construction of railway carriages - - -	2446	6th Oct. 1863	George Dyer.
Railway carriages - - - -	2447	6th Oct. 1863	Alexander Johnston.
Application of wheels to railway carriages -	2523	14th Oct. 1863	Richard Hudson Smither
Apparatus for ascertaining the weight of the load supported by the springs of railway locomotives and carriages, for the purpose of regulating or equalizing such load. (*Communicated by Ludwig Starck.*)	2537	17th Oct. 1863	Moritz Meisel.
Railway waggons for the transfer of minerals and general merchandize - - - -	2632	24th Oct. 1863	Arthur Potter. William Perceval Potter.
Improvements in atmospheric railways and in carriages for the same.	2685	24th Oct. 1863	Alexander Alison.
Apparatus used for connecting railway carriages and trucks.	2920	20th Nov. 1863	Giardinelli Spooner Kirkman.
Railroad car springs - - - -	3007	1st Dec. 1863	Perry Green Gardiner.
Improvements in railway engines, carriages and permanent way for steep inclines.	3182	16th Dec. 1863	John Barraclough Fell.
Locomotive engines and trains for railways, tramways and common roads.	3195	18th Dec. 1863	William Bridges Adams.
Construction and building of portable cottages or houses and other buildings. (*Railway carriages.*)	3196	18th Dec. 1863	Robert Saunders.
See also "WHEELS FOR CARRIAGES." *See also* "AXLES." *For* Ventilating Railway Carriages, *see* "VENTILATION."			
IV.—Railway Buffers and Breaks; Retarding and Stopping Trains; Preventing Collisions, &c.			
Certain improvements in the means of retarding or stopping railway and other carriages.	144	16th Jan. 1863	John Kerr.
Apparatus for retarding and stopping railway carriages. (*Communicated by Charles Fray, Vincent Paul Amédée Varenne, Louis Casimir Descouleur and Sabin Joseph Cazier.*)	172	20th Jan. 1863	Michael Henry.
An improved spring catch or fastening applicable to windows and other useful purposes. (*To railway breaks.*)	318	4th Feb. 1863	William Thomas Weston
An improved atmospheric brake or break -	440	18th Feb. 1863	Michel Siégrist.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
RAILWAYS, &c.—*continued.*			
Improvements in springs to be used for railway buffers, draw hooks, and also for carrying springs of railway carriages and other vehicles	1102	2nd May 1863	John William Gibson. William Turner.
Stopping and starting railway trains	1121	5th May 1863	Frank Applegate.
Railway breaks	1349	29th May 1863	Alfred Abadie.
Railway brakes	1641	1st July 1863	Thomas Taylor.
An improved method of breaking the speed of and stopping railway trains or other locomotive wheeled carriage or carriages, at the same time signalling to the driver, or for using the signal and break separately.	1851	24th July 1863	William Lawson Barnc .
Buffing and traction apparatus of railway carriages and waggons.	1889	30th July 1863	George Smith.
Brakes for railway and other carriages	1919	4th Aug. 1863	Joseph Abrahams.
Improved means of preventing accidents upon railways. (*See* "CARRIAGES.")	2010	14th Aug. 1863	Robert Benjamin Grec - wood.
Railway breaks actuated by the pressure of the atmosphere.	2015	14th Aug. 1863	Michel Siegrist.
Certain improvements in break blocks for railway and other carriages, and in the means of applying the same.	2117	27th Aug. 1863	John Clark.
An improved wagon break	2193	5th Sept. 1863	Thomas Smith.
Apparatus applied to railway carriages and trains in order to obtain greater safety to passengers.	2285	17th Sept. 1863	John Gottlieb Ulrich.
An improved break for railway and other carriages	2376	28th Sept. 1863	Thomas Lowe.
Railway and other breaks (*Communicated by Isidore Alexandre Moineau.*)	2403	1st Oct. 1863	Henri Adrien Bonnevi .
Construction of railway carriages	2446	6th Oct. 1863	George Dyer.
Railway carriages	2447	6th Oct. 1863	Alexander Johnston.
Breaks for railway trains and other purposes	2557	19th Oct. 1863	Louis Eynard.
Breaks applicable to railway and other carriages	2798	11th Nov. 1863	François Testuz.
Working railway breaks (*Communicated by Donald Bethune.*)	3051	4th Dec. 1863	Richard Archibald Br - man.
Railway carriage and other brakes	3083	8th Dec. 1863	Jean Aubert.
Railway engines, carriages and permanent way for steep inclines.	3182	16th Dec. 1863	John Barraclough Fell.
Locomotive engines and trains for railways, tramways and common roads.	3195	18th Dec. 1863	William Bridges Adams.
A new apparatus for the prevention of railway accidents. (*Reflecting apparatus.*)	3243	23rd Dec. 1863	Mara Matilda Twining.
See also "SIGNALS."			

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
REAPING, MOWING, MAKING HAY.			
Reaping machines (*Communicated by Stanislaus Lilpop.*)	21	2nd Jan. 1863	Robert Charles Ransome.
Reaping and mowing machines (*Partly communicated by Walter Abbott Wood.*)	78	9th Jan. 1863	David Ball Parsons.
Reaping and mowing machines (*Communicated by Robert Bodington.*)	260	28th Jan. 1863	Henry Crichley.
Lawn mowing machines	381	12th Feb. 1863	Alexander Morton.
Reaping and mowing machines (*Partly communicated by Walter Abbott Wood.*)	598	3rd March 1863	David Ball Parsons.
Reaping or mowing machines	751	20th March 1863	John Brigham. Richard Bickerton.
Improvements in reaping and mowing machines, part of which improvements are applicable to horse works.	810	28th March 1863	Reuben Sims.
Reaping and mowing machines	874	7th April 1863	Adam Carlisle Bamlett.
Horse rakes	911	10th April 1863	John Wightman. Charles Dening.
Improvements in reaping and mowing machines, part of which improvements is applicable to other useful purposes.	1001	22nd April 1863	Theodore Grace.
Lawn mowing, rolling and collecting machines	1022	24th April 1863	John Cornes. John Coope Davis.
Reaping and mowing machines	1090	30th April 1863	Edward Mitchell.
Agricultural implements	1176	9th May 1863	Jesse Lee. Matthew Gutteridge.
Machinery for cutting or shearing the edges of grass or turf.	1185	11th May 1863	James Shanks.
Grass mowing and reaping machines	1188	12th May 1863	William Mattison. George Barker.
Reaping and mowing machines (*Communicated by Richard Lamb Allen.*)	1190	12th May 1863	Henry Wickens.
Lawn mowing and rolling machines	1248	19th May 1863	Charles Barnard. John Bishop. Charles Barnard, junior. Godfrey Barnard.
Horse rakes	1368	1st June 1863	John Davey.
Harvesting machines	1503	16th June 1863	William Manwaring.
A combined machine for collecting and placing in rows, or collecting and elevating into a waggon or elsewhere, hay, corn or other agricultural produce.	1514	17th June 1863	John Banwell.
Reaping machines	1574	22nd June 1863	Charles Thomas Burgess.
Reaping and mowing machines	1761	14th July 1863	Richard Hornsby, junior. James Edwin Phillips.
Horse rakes and hand rakes	1849	23rd July 1863	Thomas Perkins.
An apparatus for collecting fruit from trees without injury	1855	25th July 1863	Thomas Charles Bull. Thomas Morgan.
Improvements in certain parts of reaping machines and in the working or application of the same.	1984	11th Aug. 1863	William Gray.
Reaping machines	2055	18th Aug. 1863	Cyrus Hall McCormick.
Reaping and mowing machines	2169	2nd Sept. 1863	Reuben Sims.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
REAPING, &c.—*continued.*			
An improved machine for mowing grass or reaping grain.	2212	8th Sept. 1863	Louis Adam.
Reaping machines - - - -	2329	21st Sept. 1863	Charles Thomas Burgess.
Reaping or mowing machines - - -	2339	22nd Sept. 1863	John Brigham. Richard Bickerton.
A new and useful machine or carriage for turning and spreading hay and for other useful agricultural purposes.	2397	30th Sept. 1863	Ezekiel Williams Bullard.
Reaping and mowing machines - - -	2695	30th Oct. 1863	John Brigham. Richard Bickerton.
Haymaking machines - - -	2785	9th Nov 1863	George Ryder. Matthew Gutteridge.
Reaping and mowing machines - - -	3054	4th Dec. 1863	Richard Hornsby, junior. James Edwin Phillips.
Lawn mowing and grass cutting machines - - (*Partly communicated by Henry Fisher.*)	3092	8th Dec. 1863	James Edward Boyd.
Reaping and mowing machines - - - (*Communicated by William Anson Wood.*)	3095	8th Dec. 1863	William McIntyre Cranston.
REFLECTORS FOR LAMPS; REFLECTION OF LIGHT.			
A new apparatus for multiplying indefinitely the reflections of all objects that are capable of being viewed in it.	102	13th Jan. 1863	Thomas Boyle.
Reflectors - - - - (*Communicated by Pierre Thibault.*)	308	3rd Feb. 1863	William Edward Newton.
Shades or reflectors for lighting purposes - -	351	7th Feb. 1863	Matthew Hackforth.
Construction and arrangement of shades and reflectors for gas lights.	1117	5th May 1863	Robert George Kent.
Improvements in protecting or preserving the silvering or quicking on glass, and in the manufacture of glass vessels for silvering or quicking - (*Globes and light reflectors.*) (*Communicated by Joseph Jules Anthoine and François Etienne Hyppolite Brossette.*)	1512	16th June 1863	Richard Archibald Brooman.
Reflecting apparatus - - - (*Communicated by Olof Johan Sodderberg.*)	2521	14th Oct. 1863	Ossian Esaias Sonnenstein.
Apparatus used in gas lighting - - -	2800	11th Nov. 1863	William Renwick Bowditch.
A new apparatus for the prevention of railway accidents. (*Reflecting apparatus.*)	3243	23rd Dec. 1863	Mara Matilda Twining.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
RETORTS AND CRUCIBLES.			
Improvements in machinery for digging, compressing and moulding peat or turf, and for retorts and kilns for drying peat or turf, and making peat or turf charcoal, through the agency of hydrocaloric or superheated steam, and for collecting the products of distillation whilst charring the peat or turf.	528	25th Feb. 1863	Thomas Vincent Lee.
Furnaces and apparatus for manufacturing oxide of zinc or zinc white. (*And crucibles.*) (*Communicated by Heinrich Felsch.*)	546	26th Feb. 1863	James Humby.
Improvements in the manufacture of illuminating gas and in apparatus employed therein. (*Communicated by Dr. William Elmer.*)	638	6th March 1863	George Tomlinson Bousfield.
Improvements in treating tin ores and in apparatus for treating ores and matters containing arsenic.	679	12th March 1863	James Polkinghorne.
Apparatus employed in the fusion, manufacture, production and refining of metals.	853	2nd April 1863	Astley Paston Price.
Improvements in the manufacture of wrought iron and steel, and in the apparatus to be employed therein. (*Communicated by Adrien Muller.*)	1115	5th May 1863	John Henry Johnson.
Improvements in coke ovens, and in building and heating ovens or retorts for generating coal gas connected therewith.	1287	22nd May 1863	George Stevens.
Improvements in treating ores and other substances containing iron, in the manufacture of iron, steel and alloys of iron, and of a purifying and deoxidizing agent therefrom, also in the construction of retorts or kilns for treating the said ores and substances.	1728	10th July 1863	William Henderson.
Improvements in expelling solid and liquid refuse matter from steam and sailing ships, below the water line, applicable also for discharging cannon below water from ships and forts, and in part for charging gas retorts and iron furnaces, and for other similar useful purposes. (*Communicated by John Palmer.*)	1843	23rd July 1863	Matthew Augustus Soul.
An improved fire-proof cement which may be employed for covering walls, ceilings and floors, and is also applicable in the manufacture of fire bricks, crucibles, retorts, melting pots, and for other purposes where fire resisting properties are required.	1908	1st Aug. 1863	Richard Edwin Bibby.
Means or apparatus for the production of charcoal and other products from refuse tan and other woody substances.	2029	15th Aug. 1863	Thomas Brooks.
Construction of retorts or ovens for extracting oil from certain descriptions of cannel coal or other bituminous substances.	2080	21st Aug. 1863	Robert Griffiths.
Improvements in apparatus for supplying gas to railway carriages and other moving structures, and in apparatus for manufacturing and holding gas in ships and other vessels, parts of such apparatus being also applicable for manufacturing and holding gas elsewhere - -	2374	26th Sept. 1863	William Malam. William Tice.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
RETORTS, &c.—*continued.*			
Improvements in distilling hydro-carbons from coal shale and other bituminous substances, and in apparatus employed for that purpose.	2812	12th Nov. 1863	Andrew Craig.
Improvements in apparatus for the distillation of coal and peat, and such other substances as are or may be used for the manufacture of solid and liquid volatile hydro-carbons, or for the manufacture of the said hydro-carbons and coke.	2886	18th Nov. 1863	William Mattie Williams.
Improvements of stills or retorts for the distillation of petroleum or tars from coal or shale or the products thereof.	2899	19th Nov. 1863	Anthony Gapper Southby.
Apparatus employed in the manufacture of paraffin and other like oils from shale, cannel and other minerals.	2963	25th Nov. 1863	George Parkin.
Improvements in the process and manner of making gas for illuminating, heating and other purposes, a part of which may also be applied to the production of metallic oxydes. (*Communicated by William Henry Gwynne.*)	3029	2nd Dec. 1863	Henry Holdrege.
Improvements in the treatment and purification of plumbago for the manufacture of crucibles and other fire-proof articles, and in apparatus employed therein.	3107	9th Dec. 1863	Thomas Vaughan Morgan
ROCKETS.			
Improvements in rocket torpedos and in the apparatus for directing the flight of the same under water. (*Communicated by Rufus Waples and Pascal Plant.*)	52	6th Jan. 1863	John Henry Johnson.
An improved war rocket and rocket tube - -	3102	9th Dec. 1863	Thomas Hanmer Fletcher. Robert Forrest.
ROPES, CORDAGE, TWINE, OAKUM, WIRE ROPES.			
Apparatus for polishing yarn, twine, threads and other similar materials - - - -	324	5th Feb. 1863	Joseph Gill. James Parkin.
Machinery or apparatus for doubling or twisting yarn, thread, braid, rope or similar articles. (*Communicated by Jean Marie Daillon.*)	553	27th Feb. 1863	Edward Thomas Hughes.
Improvements in the manufacture of wire rope and cordage, and in the machinery employed therein.	575	28th Feb. 1863	Samuel Bateman.
Improvements in the manufacture of cords, ropes and cables, and in machinery employed therein, applicable also to spinning, winding and twisting fibrous and filamentous substances. (*Communicated by Jean Antoine de Maniquet.*)	785	25th March 1863	Richard Archibald Brooman.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
ROPES, &c.—*continued.*			
Machinery for twisting and doubling cotton, hemp, flax and other like fibrous materials. (*Making twine or cord.*)	1249	19th May 1863	Stephen Rhodes.
An improved construction of marline spike - - (*Communicated by Albin Warth.*)	1369	1st June 1863	Alfred Vincent Newton
Twisting machines particularly applicable to the manufacture of strings, strands, ropes, or cables.	1601	25th June 1863	Jules Ouarnier Mathieu
Manufacture of mats, floor cloths or coverings for floors, straps, bands, ropes and other analogous articles which are usually made of textile or fibrous materials. (*Communicated by Placide Peltereau.*)	1831	21st July 1863	William Edward Newton
Improvements in and apparatus for dressing or preparing for spinning hemp, flax, manilla-hemp and other like fibrous material.	1833	22nd July 1863	James Ronald.
Machinery for the manufacture of yarns, threads, laid twine and other cordage - - -	1886	30th July 1863	Joseph Thompson Stephens. Charles Hoare.
Improvements in the manufacture of oakum and in apparatus therefor - - - -	1960	8th Aug. 1863	Nedrick Jarvie. William Miller.
Apparatus for serving ropes for ships' rigging and other purposes.	1995	12th Aug. 1863	Robert Stirling Newall.
Machinery or apparatus for preparing cut rope strands or yarns for carding into oakum.	2108	26th Aug. 1863	Theophilus Westhorp.
Improvements in the manufacture of tubes, rings and cords of india-rubber, and in covering telegraph wires - - - - - (*Cords for springs.*)	2893	18th Nov. 1863	Josiah George Jennings. Manuel Leopold Jonas Lavater.
An improvement in yarn strings for tying up firewood.	2938	21st Nov. 1863	Thomas Humphreys.
The production of thread, cordage and woven textile fabrics from prepared fibre of hemp or any of the plants known of the order or genus "Cannabis," and in mixing such prepared fibre with cotton, silk or animal wool - -	2950	24th Nov. 1863	St. George Gregg. Thomas Gray.
Manufacture of paper, thread, cordage and fabrics from beetroot.	2967	25th Nov. 1863	Louis Accarain.
Improved arrangements of apparatus or mechanism for rendering ships' cables less likely to part during heavy riding. (*See* "SHIPBUILDING.")	3144	12th Dec. 1863	Robert Saunders.
Manufacture of ropes made of hemp or other fibrous substances.	3190	18th Dec. 1863	William Clarke.
Improvements in and apparatus for the conversion of ropes and other cordage into oakum, tow and paper stuff, parts of which are applicable to teasing and cleaning wool or hair on skins, and dressing "waste" tow, wool, hair and other "waste" fibres.	3246	23rd Dec. 1863	James Ronald.
For Telegraphic Cables, *see* "TELEGRAPHS."			

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SALT.			
Improvements in generating and condensing steam and evaporating liquids, and in the apparatus employed therein. (*Condensing brine.*)	38	5th Jan. 1863	Humphrey Chamberlain.
Manufacture of carbonate of magnesia and of iodine and kelp salt and other products from kelp.	521	25th Feb. 1863	William Readman.
Improvements in the construction and arrangement of galvanic batteries, and in the utilization of products resulting therefrom. (*Obtaining saltpetre.*)	1732	10th July 1863	Ludwig Stille.
Apparatus for manufacturing salt - - -	2030	15th Aug. 1863	John Grantham.
Apparatus for evaporating and distilling - - (*Salt and saltpetre.*)	2106	26th Aug. 1863	Jacques Louis Kessler.
Improvements in the manufacture of salt and in boilers to be fed by salt water. (*Communicated by Charles Louis Edouard Lequin.*)	2875	16th Nov. 1863	Richard Archibald Brooman.
Treating brine from salted flesh or fish for the obtainment of useful products therefrom.	3295	30th Dec. 1863	Alexander Whitelaw.
SEWING AND EMBROIDERING.			
Sewing-machines - - - - -	140	15th Jan. 1863	Alexander Prince.
Driving sewing-machines - - -	405	14th Feb. 1863	James Lewis.
Sewing-machines - - - - - (*Communicated by Frederick William Grote and Claus Ortgiers Tietjen.*)	514	24th Feb. 1863	William Clark.
Sewing-machines - - - - - (*Communicated by Lebbeus Wisner Lathrop.*)	576	28th Feb. 1863	George Haseltine.
Sewing-machines - - - - -	741	19th March 1863	George Henry Smith.
An improved application of embroidery to cotton printed fabrics - - - -	793	26th March 1863	Thoms Parkinson. John Wood.
Sewing-machines - - - -	938	14th April 1863	John Keats. William Stephens Clark.
Machinery for sewing and stitching - - -	1016	24th April 1863	William Newton Wilson. James Graham Grey.
Improvements in sewing-machines and in apparatus connected therewith.	1126	5th May 1863	Samuel Beach Cochran.
Sewing-machines - - - -	1132	6th May 1863	Isaac Merritt Singer.
Sewing-machines - - - - - (*Communicated by James Alford House and Henry Alonzo House.*)	1137	6th May 1863	Alfred Vincent Newton.
Sewing-machines - - - - -	1212	14th May 1863	Alexander Pilbeam.
Certain improvements in sewing-machines - -	1262	20th May 1863	Joseph Coignard.
A new and improved ornamental fabric - - (*Embroidering.*)	1440	10th June 1863	William Madders.
Improvements in sewing-machines, which said improvements are also applicable to other useful purposes - - - - -	1528	18th June 1863	Jonas Rolph. Alfred Heald.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SEWING, &c.—*continued.*			
ɔnstruction of sewing-machines - - - (*Communicated by Richard Mott Wanzer.*)	1605	25th June 1863	Henry Clay Lee.
onstruction of sewing-machines - - -	1725	10th July 1863	Thomas Legg. Richard Griffith.
mproved arrangements of the parts in sewing-machines for using shoemakers' wax thread, suitable for heavy boot or other leather work to which it may be applied.	2057	19th Aug. 1863	William Jackson.
Iode of and apparatus to be used in sewing by machinery. (*Communicated by Charles Frederick Bosworth.*)	2151	31st Aug. 1863	Alfred Vincent Newton.
Improvements in machinery for stamping or obliterating and printing especially applicable to post-office purposes, parts of which improvements are applicable to machines in which cams are employed. (*Applicable to sewing-machines.*)	2261	15th Sept. 1863	George Howell.
Metallic instruments to be used as substitutes for bristles in sewing, stitching, closing and otherwise joining boots and shoes and other leather work - - - - - - - -	2352	24th Sept. 1863	Thomas Marshall. William Marshall.
Improvements applicable to sewing-machines -	2440	5th Oct. 1863	William Legg.
Sewing and embroidering machines - - (*Communicated by Antoine Bonnaz.*)	2544	17th Oct. 1863	William Clark.
Improvements in forming stitches over the edges of fabrics and in machinery connected therewith. (*Communicated by Abraham Hart.*)	2572	20th Oct. 1863	George Davies.
Sewing-machines - - - - (*Communicated by Walter Davis Richards.*)	2591	21st Oct. 1863	William Edward Newton.
Sewing-machines - - - - (*Communicated by Richard Mott Wanzer.*)	2634	24th Oct. 1863	Benjamin Browne.
Sewing-machines - - - - - (*Communicated by Charles Henry Willcox.*)	2645	26th Oct. 1863	James Willcox.
Sewing-machines - - - - -	2713	3rd Nov. 1863	Thomas Wright Alderton.
Sewing-machines - - - - -	2727	4th Nov. 1863	Elias Howe, junior.
Sewing-machines - - - - (*Communicated by Walter Davis Richards.*)	2764	6th Nov. 1863	William Edward Newton.
An improvement in sewing-machines - - (*Communicated by Jerome Burge Secor and William Henry Butler.*)	2772	7th Nov. 1863	William Clark.
Sewing-machines - - - - - -	2774	7th Nov. 1863	Alexander Prince.
Sewing-machines - - - - - -	2842	14th Nov. 1863	Joseph Pickles Binns.
Apparatus and parts of sewing-machines - - (*Communicated by Jean Louis Thenen.*)	2845	14th Nov. 1863	Edward Thomas Hughes.
Improvements in driving sewing-machines, which improvements are also applicable for driving other machinery.	2955	24th Nov. 1863	James Lewis.
Mode of marking patterns or designs upon gored and straight skirts and skirtings, to serve as a guide for sewing and embroidering thereon.	2972	26th Nov. 1863	John Thorpe.
Sewing-machines - - - - -	2982	27th Nov. 1863	James Bateman. Daniel Bateman.
Improvements in sewing-machines and in apparatus connected therewith.	3020	1st Dec. 1863	Samuel Beach Cochran.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SEWING, &c.—*continued.*			
Certain improvements in sewing-machinery (*Communicated by Isaac Merrit Singer.*)	3181	16th Dec. 1863	Alfred Vincent Newton.
Machines for sewing and stitching (*Communicated by Richard Mott Wanzer.*)	3211	19th Dec. 1863	Charles Tiot Judkins.
Apparatus for darning stockings and other fabrics	3221	21st Dec. 1863	Robert Baynes.
Sewing-machines	3271	26th Dec. 1863	John Victor Boesiger.
Apparatus used when giving motion to sewing-machines by straps or bands.	3292	29th Dec. 1863	James Cumming.
SHIP AND BOAT BUILDING, SHEATHING, REPAIRING, WORKING, LOADING AND UNLOADING; MASTS, SPARS, &c.			
Battery plates	2	1st Jan. 1863	William Henry Brown.
An improved method of attaching sheathing to iron or other vessels.	18	2nd Jan. 1863	William Henry Muntz.
Means or apparatus for saving or preserving money, papers or other valuable property at sea, in case of shipwreck. (*Waterproof vessel or boat.*) (*Communicated by Charles Blacktin.*)	35	5th Jan. 1863	Henry Blacktin.
Means for facilitating the repairs of ships and other structures.	204	22nd Jan. 1863	Charles Lungley.
Improvements in light rowing boats usually termed wager boats.	238	27th Jan. 1863	Richard Augustus Willoughby Green.
Armour-plated and other ships	299	2nd Feb. 1863	William Clark.
Mode of uniting metallic surfaces (*Sheathing.*) (*Communicated by William Brainerd Barnard.*)	313	4th Feb. 1863	George Haseltine.
Construction of iron ships or vessels and of armour applicable thereto.	319	4th Feb. 1863	Barnabas Russ.
An improved method of treating sheeting and plates of iron to be used in ship building and marine constructions, for protection against marine animals and marine plants.	341	6th Feb. 1863	Adolf Ellissen.
Improvements in the application of gas for the preparation of wood-work generally and iron ships, for their better preservation and reception of paint or other protecting coating, and for disinfecting ships, hospitals and other places. (*Communicated by Henri De Lapparent.*)	348	7th Feb. 1863	William Clark.
Armour plating or protecting ships and vessels	466	20th Feb. 1863	Richard Bell.
Manufacture of armour plates for ships and other structures. (*Communicated by Alexander Holley.*)	481	21st Feb. 1863	John Brown.
Construction and arrangement of armour plates for ships.	497	24th Feb. 1863	Daniel Spink.
Construction of war and merchant ships	508	24th Feb. 1863	Hugh Bowlsby Willson.
Apparatus for connecting and securing together planks of wood applicable to the building and caulking of ships and other vessels.	538	26th Feb. 1863	George Henry Lilley.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SHIP BUILDING, &c.—*continued.*			
Manufacture of armour plates or blocks for defensive purposes.	542	26th Feb. 1863	James Yates.
Improved apparatus for facilitating the cleaning of vessels' bottoms while afloat.	570	28th Feb. 1863	Edward Paine.
Improvements in the construction of screw propelled ships and in the arrangement and mode of disconnecting, withdrawing and lifting screw propellers.	571	28th Feb. 1863	Thomas Edward Symonds.
Improvements in metal sheathing for ships and vessels, and in the securing of such sheathing thereto.	589	3rd March 1863	Robert Saunders.
An improved mode of applying and fastening metal sheathing to the bottoms of iron ships or vessels, and to iron for other uses - -	602	4th March 1863	Charles Mark Palmer. John M'Intyre.
Improvements in manufacturing curvated armour plates and other iron work, and in machinery or apparatus employed therein.	614	4th March 1863	William Littell Tizard.
Machinery for the manufacture of nails - - (*Sheathing nails.*)	615	5th March 1863	William Whittle.
Improvements in protecting and preserving the bottoms and sides of ships and other submerged surfaces, from oxidation or fouling by incrustation, the attachment of barnacles, the action of animalculæ, or from any other like causes of injury.	641	6th March 1863	Henry Revell Spicer.
Improved armour plates for vessels, turrets, targets, forts and other structures in which armour plates are or may be used - - -	655	9th March 1863	William John Clapp. Nathaniel Coats.
Sheathing iron ships, caissons and other like structures.	665	11th March 1863	William Robinson Mulley
Machinery for rolling armour plates, bridge plates, boat plates, and other plates and bars of iron -	681	13th March 1863	John Harris. Joseph Butler. John Henry Fraser.
Portable hydraulic punching machines - - (*For punching ship plates.*)	694	14th March 1863	Joseph Tangye.
Construction of ships - - - - - -	696	14th March 1863	James Coxon Richardson
Discharging projectiles below the water line of navigable vessels and other structures.	705	16th March 1863	George Parsons Beley.
Improvements in the construction of ships and vessels for the purpose of obtaining additional strength and motive-power.	707	16th March 1863	John Smethurst.
A new and useful or improved yellow metal sheathing nail or spike, which by means of a nail cutting engine is cut from yellow sheathing metal.	739	19th March 1863	Samuel Leonard Crocker.
Improvements in protecting the surface of the iron and steel of ships and all other structures, except that of cables, tanks and boilers, while in contact with water, from decay, in preventing or abating and in facilitating the removal of foulness of ships' bottoms, and in giving a capacity of increased speed to ships.	776	25th March 1863	John White.
Portable apparatus for working drills and other instruments - - - - - (*For ship building.*)	794	26th March 1863	William Tod. Robert Paterson.
An improved mode of constructing the armour of vessels of war - - -	829	31st March 1863	Archibald Hamilton Be[illegible] Valentine Græme Bell.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SHIP BUILDING, &c.—*continued.*			
Means or apparatus for cleaning the bottoms of ships or other floating vessels.	845	2nd April 1863	William Henry Phillips.
Protecting vessels of war and fortifications from the effects of projectiles.	848	2nd April 1863	Douglas Symonds Sutherland.
Improvements in the construction of ships or vessels, part of which improvements are also applicable for constructing buildings, and for various other purposes in which rolled iron is employed.	851	2nd April 1863	William Jones.
Improvements in preventing the fouling of ships' bottoms and in cleansing the same when fouled	897	9th April 1863	Alexander Hett. Frederick William Basset.
A new method of and apparatus for cleansing ships' bottoms.	900	9th April 1863	James Ryder Burton, K.H.
An improved medicated oil for the preservation of metal, wood or stone. (*Ships.*)	910	10th April 1863	Robert Smith.
Improvements in the construction of vessels of war, part of which improvements is applicable to fortifications.	914	10th April 1863	Henry Caudwell.
Turn tables, turn bridges and slips - -	984	20th April 1863	Ebenezer William Hughes.
Machinery or apparatus for bending or straightening metal plates.	998	21st April 1863	Hugh Donald.
Improved apparatus for fixing drills, which invention is also applicable for fixing apparatus for raising, supporting and suspending weights, and for other analogous purposes. (*Ships' plates.*)	1029	25th April 1863	Leopold De Breánski.
Improvements in welding and rolling metals and in machinery connected therewith. (*Armour plates.*) (*Communicated by Michel Helson.*)	1091	30th April 1863	Edward Griffith Brewer.
Portable apparatus or instruments for rivetting, caulking, chipping and otherwise operating upon and treating metals and other substances. (*Building ships.*)	1095	1st May 1863	John McFarlane Gray.
Manufacture of sheets, slabs and other articles when fibrous materials are employed. (*For interior lining for ships.*)	1158	8th May 1863	Charles Frederick Bielefeld.
Improvements applicable to the defending of ships or vessels and forts when armour plating is employed.	1171	9th May 1863	John Bland Wood, M.D.
Armour plates of hammered or rolled wrought iron, the whole of the rivets being protected against the direct blows from the cannon shots.	1181	11th May 1863	Charles Louis Van Tenac.
Manufacture of thick plates of wrought iron for armour plates and other purposes - -	1203	13th May 1863	James Edward McConnell. George Hinton Bovill.
Improvements in preventing the fouling of the bottoms and sides of ships and vessels, particularly applicable to ships and vessels constructed of or sheathed with iron.	1232	16th May 1863	Frederick Maun Burns.
An improved apparatus for saving from destruction by fire persons and property in houses, buildings and ships, and also for ventilating ships. (*Communicated by James Partridge.*)	1256	19th May 1863	Abraham Parker.
Attaching copper or other sheathing to iron vessels	1273	21st May 1863	Frederic Pelham Warren.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SHIP BUILDING, &c.—*continued.*			
Armour for forts and floating batteries - -	1364	1st June 1863	James Chalmers.
Improvements in apparatus for loading and unloading vessels, and for elevating and otherwise conveying sacks, casks and other packages, parcels or objects, from one locality to another.	1408	8th June 1863	Richard Wallis.
An improved mode of constructing ships, vessels or boats, and of apportioning their freight to that construction, so as to prevent their sinking or being destroyed by fire.	1414	8th June 1863	William Miller.
Mounting and fitting bedsteads, chairs and other moveable seats on board ship. (*Communicated by Herman Hobach and Martin Henri Rumpf.*)	1415	8th June 1863	William Clark.
Improvements in the manufacture (by the introduction of cocoa nut husk or part thereof) of a substitute for ordinary felt and kamptulicon, and in utilizing said cocoa nut husk or part thereof for packing of wine coolers, refrigerators and ice chests, and caulking of ships and vessels.	1423	8th June 1863	Henry Reynell.
Compositions for coating or covering ships' bottoms	1438	9th June 1863	Henry Frederick M'Killop.
Improvements in constructing the sides of ships, batteries and fortifications, and in applying armour plates thereto.	1460	11th June 1863	Edwin Owen Hallett.
Means of and apparatus for cleansing ships' bottoms and sides.	1481	13th June 1863	William Nelson Hutchinson.
Improvements in the construction of and in the means of ballasting ships and other vessels.	1483	13th June 1863	Thomas Alexander Ellis.
An improved helm for working the rudders of ships or vessels.	1484	13th June 1863	Aimé Méhu.
A new material or compound applicable to the manufacture of pipes or tubes, to caulking or covering ships' bottoms, and to other useful purposes.	1550	20th June 1863	Charles Peterson.
Construction of steam vessels - - -	1555	20th June 1863	William Louis Winans. Thomas Winans.
Adapting propellers for propelling ships or vessels -	1570	22nd June 1863	William Louis Winans. Thomas Winans.
Adapting propellers for propelling ocean steam vessels - - - - - -	1571	22nd June 1863	William Louis Winans. Thomas Winans.
Machinery for manufacturing or preparing iron and other metal plates for ship building and other purposes.	1604	25th June 1863	Henry Griffith Craig.
An improved method of and apparatus for working guns in vessels and forts, and discharging them under water.	1637	1st July 1863	Cowper Phipps Coles.
Improvements in working guns and in matters relating thereto.	1703	8th July 1863	Henry Duncan Preston Cunningham.
Improvements in ships and in propelling the same - (*Communicated by Auguste Salzmann.*)	1709	9th July 1863	Richard Archibald Brooman.
Sheathing or coating iron ships - -	1748	13th July 1863	Robert Stocks Walker.
Construction of ships and other floating bodies -	1781	16th July 1863	Joseph Needham Taylor. William Austin.
Improvements in boat building and in machinery for shaping wood therefor.	1791	16th July 1863	Nathan Thompson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SHIP BUILDING, &c.—*continued.*			
Improvements in expelling solid and liquid refuse matter from steam and sailing ships, below the water line, applicable also for discharging cannon below water, from ships and forts, and in part for charging gas retorts and iron furnaces, and for other similar useful purposes. (*Communicated by John Palmer.*)	1843	23rd July 1863	Matthew Augustus Soul.
Improvements in the construction and protection of ships, vessels and floating batteries, and in the preparation and arrangement of materials for those purposes, some of such improvements being applicable to the construction and protection of land fortifications.	1929	5th Aug. 1863	George Clark.
A new application of rolled metal plates to the formation of railways, bridges, tramways and other structures. (*Masts and yards of ships.*)	1937	6th Aug. 1863	Joseph Emerson Dowson.
An improved composition for coating or painting the bottoms of ships or vessels to prevent them from fouling - - - - -	1947	6th Aug. 1863	Thomas Simmelkiar. John Ibbetson Spicer.
Apparatus for preventing sea sickness - - (*Communicated by Henry Giffard.*)	1953	7th Aug. 1863	John Henry Johnson.
Machinery for punching and for marking plates in which holes are to be punched. (*For ships.*)	2014	14th Aug. 1863	Matthew Hodgson Lishman.
Improvements in the manufacture and fitting or securing of armour plates, blocks or bars, and in the machinery or apparatus employed therein, parts of which improvements are applicable to heavy forgings generally.	2051	18th Aug. 1863	James Yates.
Machinery for planing curved, curvilinear, irregular and other forms in iron, steel and other metals. (*Ships' armour plates.*)	2077	21st Aug. 1863	Robert Thompson.
Cleansing ships' bottoms - - - -	2097	24th Aug. 1863	Henry Frederick M'Killop.
Improved machinery for sawing irregular forms of wood. (*For ship building.*) (*Communicated by Henry Vrooman.*)	2152	31st Aug. 1863	Alfred Vincent Newton.
Hydraulic apparatus - - - - (*Masting-machines.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
An improved composition or coating for the protection and preservation of surfaces of iron, wood and other materials - - - (*Ships' bottoms.*)	2214	9th Sept. 1863	Joseph Lillie. John Haines White.
Improvements in side lights for ships and other navigable vessels, and in the manufacture of the same.	2229	10th Sept. 1863	John Hays Wilson.
An improved bath or bathing machine adapted for deep water.	2238	11th Sept. 1863	Louis Desens.
Machinery for planing or cutting off the sides of armour plates.	2264	16th Sept. 1863	Joseph Fox.
An improved method of hanging the lower topsail yards of ships and other sailing vessels.	2276	16th Sept. 1863	John Maclean Tate.
Improvements in the construction of ships and other vessels, and in the machinery for propelling them - - - - - -	2288	17th Sept. 1863	Charles Henry Chadburn. William John Tristram.

Description of Patent	Number	Date	Name of Patentee
Iron Vessels, &c.—continued.			
[illegible]	2282	[illegible]	[illegible]
[illegible]	2285	[illegible]	[illegible]
[illegible]	2288	[illegible]	[illegible]
[illegible]	2326	[illegible]	[illegible]
[illegible]	2331	[illegible]	[illegible]
[illegible]	2374	[illegible]	[illegible]
Construction of combined iron and timber ships	2379	26th Sept. 1863	Peter Cato.
Preserving the bottoms of ships or vessels and other surfaces from the prejudicial effects of marine animals and vegetables.	2409	1st Oct. 1863	Percy Leslie, M.D. M.R.C.S., Ed.
Improvements in sheathing for navigable vessels of iron or wood, which sheathing is also applicable to the covering of roofs, walls and other purposes.	2478	9th Oct. 1863	John M'Innes.
Construction of iron and wooden ships and other vessels.	2495	12th Oct. 1863	John Galley Hartley.
Shears for cutting metals and other substances (Plathands for the navy.) (Communicated by Hugues François Aubert.)	2501	12th Oct. 1863	William Edward Gedge.
An improved apparatus for cleaning ships' hulls (Communicated by François Cupponi.)	2522	14th Oct. 1863	Henri Adrien Bonneville.
Improvements in apparatus for connecting chain cables and for clearing a ship's hawse when foul, and also in apparatus for acting on and presenting strain to the chain cables when ships are riding at anchor.	2527	15th Oct. 1863	Stephen Randoll Smith.
Means of uniting or joining plates or sheets of metal, which invention is applicable to the construction of boilers, tubes and other useful purposes. (Plates for ships.)	2549	17th Oct. 1863	Edward Henry Cradock Monckton.
Machinery for bending plates for iron ships and other like purposes.	2574	20th Oct. 1863	George Heaton Daglish. Thomas Windus.
Vessels of war	2611	23rd Oct. 1863	Jürgen Lorenz Jürgens.
Preparing cements and varnishes (for marine purposes.)	2629	24th Oct. 1863	James Brown. John Thomas Way. Thomas Mullett Evans.
Certain compositions for preserving iron ships and other submerged iron work from corrosion and from fouling.	2641	26th Oct. 1863	Marius Vian.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SHIP BUILDING, &c.—*continued.*			
Improvements in the construction of ships of war and other vessels, and in masting or rigging the same.	2673	28th Oct. 1863	John Kennedy.
An improved composition for coating ships' bottoms	2680	30th Oct. 1863	Frederic Newton Gisborne.
Apparatus for sustaining and raising ships or vessels, applicable also as life buoys.	2688	30th Oct. 1863	George Rosselet.
Improvements in the construction of iron and other ships, vessels and batteries of war, and of cupolas and armour plates applicable thereto, parts of which improvements are also applicable to other useful purposes.	2690	30th Oct. 1863	Barnabas Russ.
Building ships and vessels - - -	2703	31st Oct. 1863	John Getty.
Application of preservative coatings or compositions to the bottoms of ships and vessels.	2732	4th Nov. 1863	John Hornby Maw.
Machinery for cutting and planing iron and other metals, particularly applicable to machinery for cutting and planing armour plates - -	2735	5th Nov. 1863	Greenwood Craven. William Craven. John Craven.
Improvements in fastening together the parts of ships and vessels, and in respect to the more efficient caulking of the seams thereof.	2756	6th Nov. 1863	Robert Saunders.
Construction of ships and vessels - - - (*Communicated by William Keld Whytehead.*)	2783	9th Nov. 1863	George Tomlinson Bousfield.
Improvements in preventing the fouling of the bottoms and sides of ships and vessels, particularly applicable to ships and vessels constructed of or sheathed with iron.	2847	14th Nov. 1863	Adolf Ellissen.
Construction of armour for ships of war and land batteries.	2848	14th Nov. 1863	Thomas Symes Prideaux.
Sheathing ships and other vessels - - -	2880	17th Nov. 1863	Joseph Betteley.
Ships or vessels for war and other purposes -	2895	18th Nov. 1863	Patrick St. George Græme.
Construction of gun boats, gun vessels and rams -	2922	20th Nov. 1863	Alexander M^{c}Laine.
An improved composition for coating or covering the bottoms of ships.	2945	23rd Nov. 1863	James Smith.
Compositions applicable to the coating of ships' bottoms.	2974	26th Nov. 1863	James Baker.
Improvements in ships of war and in arming ships of war.	2995	30th Nov. 1863	Augusto Albini.
Compounds or compositions for coating or covering iron or wooden ships and vessels, metallic sheathing, telegraph cables and other objects, to preserve them from decay, fouling or other destructive action - - - -	3012	1st Dec. 1863	Jesse Gustavus Redman. George Martin.
Sheathing iron vessels and armour plated ships -	3014	1st Dec. 1863	Robert Turnbull.
Improvements in apparatus for mounting and working guns used in ships and other floating vessels, and in fortifications.	3016	1st Dec. 1863	Edward Augustus Inglefield.
Construction of ships of war and other vessels -	3036	2nd Dec. 1863	Charles Lungley.
An improved composition for covering steam-boilers and pipes and other surfaces. (*Iron ship's side.*)	3082	8th Dec. 1863	Henry Benson James.
Improvements in presses for bending metal plates into the various forms required in naval architecture and for other purposes. (*Communicated by John Cochrane.*)	3110	10th Dec. 1863	William Galloway. John Galloway.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SHIP BUILDING, &c.—*continued.*			
Certain improvements in port closers for vessels of war and forts. (*Communicated by William Stuart Auchincloss.*)	3115	10th Dec. 1863	William Clark.
Improvements in raising sunken vessels and other submerged dead weights, and in preventing the sinking of vessels in case of accident at sea, and in the apparatus employed therein. (*Communicated by James M^c^Leod.*)	3142	12th Dec. 1863	John Henry Johnson.
Improved arrangements of apparatus or mechanism for rendering ships' cables less likely to part during heavy riding.	3144	12th Dec. 1863	Robert Saunders.
Construction and building of portable cottages or houses and other buildings. (*Boats.*)	3196	18th Dec. 1863	Robert Saunders.
Construction of shot proof iron or steel walls suitable for the sides of war ships, floating batteries or forts.	3202	19th Dec. 1863	Robert Legg.
Improved means of and apparatus for trimming ships or vessels	3231	21st Dec. 1863	William Louis Winans. Thomas Winans.
Construction of batteries for ships, forts and other defences.	3249	23rd Dec. 1863	John Mathew.
Improvements in the construction of ships and vessels of war (also applicable to other ships and vessels), and in batteries and fortifications.	3281	28th Dec. 1863	Thomas Tozer.
Constructing and arming ships and floating batteries.	3293	29th Dec. 1863	William Michael Peniston.
Mounting and serving guns used upon vessels and fortifications	3309	31st Dec. 1863	James Radley.
For Ships' Logs, *see* "MEASURING PROGRESS."			
For Sounding Apparatus, *see* "MEASURING PROGRESS."			
For Ships' Pumps, *see* "PUMPS."			
For Graving Docks, *see* "DOCKS."			
For Rudders, *see* "STEERING."			
For Anchoring Ships, *see* "ANCHORS."			
For Ventilating Ships, *see* "VENTILATION."			
For Lighting Ships, *see* "LAMPS."			
SHIPS' BOATS (*Lowering and Disengaging*).			
Improved apparatus for disengaging ships' boats	407	14th Feb. 1863	Thomas Thorne.
Apparatus for lowering and disengaging boats from vessels	701	16th March 1863	Edward Oliver. George Myers.
Improved apparatus for disengaging ships' boats	1864	27th July 1863	Thomas Thorne.
Apparatus for lowering and disengaging boats from vessels	2228	9th Sept. 1863	Edward Oliver. George Myers.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SHIPS' RIGGING AND SAILS; REEFING AND FURLING SAILS; SHIPS' RIG.			
Reefing and furling ships' square sails	515	24th Feb. 1863	William Henry Lapthorn.
Means for reefing and furling square sails of ships and vessels from the decks thereof.	703	16th March 1863	Thomas William Willett.
Reefing topsails and courses	1463	11th June 1863	Thomas Alexander Elliott.
Square rigging of vessels	1515	17th June 1863	John Mills.
Improvements in making all woven and thready fabrics waterproof, and in finishing or surfacing fabrics generally. (*For sails of ships.*) (*Communicated by Etienne Guillaume.*)	1836	22nd July 1863	Charles Beslay.
Apparatus for serving ropes for ships' rigging and other purposes.	1995	12th Aug. 1863	Robert Stirling Newall.
Improvements in reefing or furling the sails of vessels and in the apparatus to be employed therein.	2041	17th Aug. 1863	Robert Baillie.
Improvements in the construction of ships of war and other vessels, and in masting or rigging the same.	2673	23th Oct. 1863	John Kennedy.
Apparatus for reefing and furling ships' square sails	2910	19th Nov. 1863	John Colling. David Gullon Pinkney.
Reefing and furling topsails, topgallant sails and royals.	3035	2nd Dec. 1863	Henry Duncan Preston Cunningham.
SHIRTS, COLLARS, WRISTBANDS, NECK-TIES, CRAVATS, SCARFS, DRAWERS, HOSE.			
Articles of dress known as collars, cuffs, wristbands, shirt fronts, habit shirts and petticoats.	212	23rd Jan. 1863	Percy Addison Cole.
Manufacture of stockings and other looped fabrics made in knitting machines. (*See* "WEAVING.")	585	2nd March 1863	John Scott Wells.
Studs or fastenings adapted to holding together parts of shirt fronts, wristbands, collars, gloves and other articles of wearing apparel.	712	17th March 1863	William Henry Atkinson.
The application of leather in the manufacture of gentlemen's scarfs and ties.	1374	2nd June 1863	John Henry Brierley.
Shirt collars and boys' and ladies' collars	1707	9th July 1863	Wellington Williams.
An improved advertising medium (*Collars and cuffs or wristbands.*)	1837	22nd July 1863	Benjamin Beral Bertram.
Manufacture of stockings and drawers	2536	16th Oct. 1863	Samuel Jay.
An improvement in collars and cuffs	2748	5th Nov. 1863	George Speight.
Improvements in the manufacture of neck-ties, cravats and waistbands, which improvements are also applicable to other articles of wearing apparel.	2813	12th Nov. 1863	Benjamin Peake.
An improved shirt collar	2976	26th Nov. 1863	John Stephen Jarvis.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SHIRTS, &c.—*continued.*			
Manufacture of socks - - - - (*Communicated by Pierre Dominique Lacroix.*)	3196	18th Dec. 1863	Henri Adrien Bonneville -
Apparatus for darning stockings and other fabrics -	3221	21st Dec. 1863	Robert Baynes.
Paper or cloth lined paper collars for gentlemen and ladies.	3261	24th Dec. 1863	Solomon Sally Gray.
Improved fastenings for scarfs, ribbons, neck-ties and other articles of dress, by means of a ring with a spring clasp or chain band or pliable shank.	3303	31st Dec. 1863	William Fulford Brown.
SHOT, SHELL, BULLETS AND OTHER PROJECTILES.			
Projectiles for ordnance - - - -	305	3rd Feb. 1863	Alexander Theophilus Blakely. Josiah Vavasseur.
Improvements in cannon and in projectiles to be used therewith. (*Partly communicated by Charles Macy.*)	331	6th Feb. 1863	Benjamin Franklin Bates.
Projectiles - - - -	433	17th Feb. 1863	George Home.
Projectiles for ordnance - - - - (*Communicated by Charles Wesley Stafford.*)	468	20th Feb. 1863	William Clark.
Improvements in ordnance and artillery, and means of operating and mounting the same, and in projectiles and instruments therefor.	484	21st Feb. 1863	Norman Wiard.
Projectiles or ignition missiles - - -	797	26th March 1863	John Norton.
Improvements in projectiles for ordnance and in fuses therefor. (*Communicated by Isaac Pettingill Tice.*)	881	7th April 1863	Alfred Vincent Newton.
A new method of rifling guns and of forming projectiles to correspond therewith.	1286	22nd May 1863	Theophilus Alexander Blakely.
Projectiles for ordnance - - - -	1334	27th May 1863	William Palliser.
Improvements in arrow shaped projectiles and in guns for discharging the same. (*Communicated by Ferdinand Leitenberger.*)	1565	22nd June 1863	William Snell.
Construction of guns and projectiles, and of carriages, platforms and shields for working and protecting guns.	1615	27th June 1863	George Clark.
Improvements in ordnance and fire-arms, and in projectiles to be used therewith.	1628	30th June 1863	Alexander Keene Richards.
Ordnance, fire-arms and projectiles - -	1887	30th July 1863	Joseph Bennett Howell.
Improvements in fire-arms and in artillery, and projectiles for the same.	1894	31st July 1863	John Coope Haddan.
Machinery or apparatus for moulding and casting hollow projectiles. (*Communicated by Jean Simon Vorux, senior.*)	1925	4th Aug. 1863	William Edward Newton.
Improvements in artillery and fire-arms, and in projectiles for the same.	2005	13th Aug. 1863	Edward Deane.
Improvements in the construction of ordnance and fire-arms, and in the projectiles to be used therewith.	2121	27th Aug. 1863	George Richards.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SHOT, &c.—*continued.*			
Improvements in breech-loading and other ordnance, part of which is applicable to the utilizing of old smooth bore cannon, and in projectiles to be used therewith.	2156	1st Sept. 1863	Jacob Snider, junior.
Certain improvements in fire-arms, ordnance and projectiles.	2401	1st Oct. 1863	James Mackay.
Improvements in throwing projectiles by means of explosive agents, and in apparatus therefor.	2508	13th Oct. 1863	John Edgar Poynter.
An improvement in projectiles - - -	2567	20th Oct. 1863	Henry Hennessy.
Projectiles - - - - -	2639	26th Oct. 1863	Theophilus Marsh.
Guns and gun projectiles - - - -	2999	30th Nov. 1863	James Chalmers.
Fuzes and shells for ordnance - - - -	3005	1st Dec. 1863	Edward Mounier Boxer.
Improvements in projectiles for ordnance, and in loading and firing ordnance.	3087	8th Dec. 1863	Theophilus Alexander Blakely.
Improvements in breech-loading fire-arms, projectiles and cartridges, and in tools or apparatus for the manufacture of projectiles.	3159	14th Dec. 1863	Thomas Wilson.
Improvements in the construction of ordnance and in projectiles to be used therewith.	3192	18th Dec. 1863	Peter Gardner.
Ordnance, fire-arms and projectiles - -	3194	18th Dec. 1863	Percival Moses Parsons.
Percussion fuses for igniting the charges of explosive projectiles, mines, torpedoes, and other charges of gunpowder or other explosive or easily inflammable substances or compounds. (*Communicated by John Jordan Eckel.*)	3250	23rd Dec. 1863	William Clark.
Mode of igniting explosive projectiles - - -	3258	24th Dec. 1863	Andrew Noble.
Projectiles for ordnance - - - -	3268	24th Dec. 1863	John Dyer Bryant.
Manufacture of projectiles - - - - -	3270	24th Dec. 1863	David Simpson Price.
SHOW CARDS, BOARDS AND TABLETS; WINDOW TICKETS, EXHIBITING GOODS FOR SALE, SHOP FRONTS, NAME PLATES.			
Tongs or forceps for grasping articles out of reach of the hand - - - - (*Adjusting articles in shop windows.*)	403	14th Feb. 1863	William Baylis. Thomas Henry Hopwood.
Apparatus for making certain indications in railway carriages. (*Name discs.*)	759	21st March 1863	Frank Applegate.
Metallic window shutters - - - -	935	14th April 1863	George Thomas Smith.
Improvements in apparatus for manufacturing beton and artificial stone, pugging clay and other similar purposes, and in the production of artificial stone, and artistic, ornamental and decorative articles, works and surfaces. (*Tablets, panels, &c.*) (*Communicated by François Coignet.*)	1086	29th April 1863	Michael Henry.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SHOW CARDS, &c.—*continued.*			
Production of show tablets, advertisement tablets, name plates, architectural facings and decorations, and other ornamental, decorative and inscriptive articles - - - - -	1111	4th May 1863	John Morris Johnson. Edmund Johnson. Charles Johnson. Louis Bertling.
Manufacture of show cards - - - - - -	1411	8th June 1863	James Hogg, junior.
New or improved apparatus for the regulated delivery of cards, tickets, labels, bills and sheets or pieces of cardboard, paper, metal or other material, for advertising or other purposes.	1964	8th Aug. 1863	Henry Rowland Brown.
Tablets, show bills and trade announcements used for advertising and other purposes.	2436	5th Oct. 1863	Benjamin George George.
Ornamenting glass and sheet gelatine - - (*For show boards, shop fronts, &c.*)	2670	28th Oct. 1863	William Nall.
Manufacture of show cards, window tickets and ornamental labels, as advertising mediums -	2698	31st Oct. 1863	Anton Wasserburger. Theodore Bessunger.
Adapting or arranging tapes and other such narrow fabrics and threads for use.	2940	21st Nov. 1863	Marcus Brown Westhead.
Certain new or improved means of protecting valuable articles exhibited in shop fronts and other places.	3239	22nd Dec. 1863	Harry Emanuel.
SIFTING, SORTING, SEPARATING.			
An improved apparatus for cleansing wheat or other grain or seeds.	135	15th Jan. 1863	Louis Pierre Jose.
Rotatory screens suitable for screening wheat and other grain or seed - - - - -	191	21st Jan. 1863	Nathaniel Clayton. Joseph Shuttleworth.
Improved machinery for separating substances of different specific gravities.	193	21st Jan. 1863	Henry Holcroft.
Processes or means employed for separating or extracting silver or other metals from lead. (*Communicated by M. Clement Roswag.*)	385	13th Feb. 1863	George Henry Birkbeck.
Improvements in rotary screens and in the machinery or apparatus employed in the manufacture of such screens.	424	16th Feb. 1863	William Nalder.
Apparatus for separating potatoes into different sizes.	480	21st Feb. 1863	Herbert Mackinder.
Machinery for dressing grain - - -	504	24th Feb. 1863	Josiah Le Butt.
An improved method of supporting screens and straw shakers specially applicable to threshing machines - - - - - -	620	5th March 1863	Edward Pellew Plenty. William Pain.
Improvements in apparatus for winding, cleaning, measuring, sorting, doubling, throwing and reeling silk, parts of which improvements are also applicable to like machinery for spinning, doubling and twisting cotton, wool and other fibrous materials.	674	12th March 1863	Frederick Buser-Kranshaar.
Apparatus for making extracts of hops and for selecting or separating the seeds and pollen from hops.	698	14th March 1863	Richard Moreland, junior.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SIFTING, &c.—*continued.*			
Improvements in wrappers or papers for needles, and in machinery or apparatus for sticking needles therein. (*Communicated by George Penrice.*)	770	24th March 1863	George Davies.
Improved apparatus for bolting flour - - (*Communicated by Jacques Chiron, André Chiron and Pierre Faure.*)	860	4th April 1863	William Edward Gedge.
Certain improvements in machinery or apparatus for crushing, grinding and dressing metallic ores, quartz and other similar substances.	884	8th April 1863	Joseph Mosheimer.
Improvements in separating ores from their gangues and in apparatus for the same. (*Communicated by Louis Napoléon Langlois.*)	920	11th April 1863	William Clark.
Machinery for separating and straightening the fibres of silk waste and other fibrous substances.	930	13th April 1863	Robert Newton.
Improvements in apparatus for separating corn from the ears and for combing straw.	971	17th April 1863	Bernard James Webber.
Apparatus for separating fluids from more solid matters mixed or combined therewith.	982	20th April 1863	James Robey.
Machinery for cleaning, sorting according to size and doubling silk and other threads.	1039	25th April 1863	Ira Dimock.
Machinery for cutting sugar and for assorting the lumps when cut.	1307	25th May 1863	William Muir.
Apparatus for sorting and washing ores - -	1431	9th June 1863	Charles Nicquet.
Thrashing machines - - - - (*Communicated by William Roberts.*)	1472	12th June 1863	Thomas Hughes Milner.
Improvements in metal screens and sieves for screening and sifting, applicable also to other openwork articles.	1540	19th June 1863	William Hicklin.
Certain improvements in the construction of reels covered with silk or other suitable material, used as machines for the purpose of dressing flour - - - - - - -	1543	20th June 1863	Thomas Smith. Thomas Moore. Major Burrell.
Machinery for winding, measuring and sizing silk - (*Communicated by Emile Duseigneur.*)	1801	17th July 1863	Richard Coenen.
Improvements in machinery for dragging bristles, applicable also to drawing or sorting fibres and hair into different lengths.	1813	20th July 1863	Augustus Smith.
Shakers for thrashing machines - - -	2027	15th Aug. 1863	Frederick Flavell.
Apparatus for separating solid from fluid fecal matters.	2126	28th Aug. 1863	Edouard Amourous.
Separating and elevating apparatus for grain or granular matters.	2167	2nd Sept. 1863	Robert Young.
Improvements in machines for crushing hard substances, for washing ores and minerals, and for separating earth and earthy matters from solid substances.	2172	2nd Sept. 1863	Frederick Charles Phillip Hoffmann.
Machinery for separating different sizes of root -	2471	8th Oct. 1863	John Spencer.
Improvements in smut machines and in machines for cleansing and peeling grain and seeds.	2534	16th Oct. 1863	François Antoine Edmond Guironnet De Massas.
Separation of molasses and other impurities from sugar crystals. (*Communicated by Professor Dr. Henry Schwarz.*)	2551	17th Oct. 1863	Fedor De Wyldé.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SIFTING, &c.—*continued.*			
Improvements in separating ores from their gangues and in apparatus for the same. (*Communicated by Jean Joseph Bonnard.*)	2558	19th Oct. 1863	William Clark.
Improvements in treating ligneous substances, in separating and recovering the fibrous portions therefrom, in preparing, bleaching and sizing the same, and in machinery employed therein. (*Communicated by Pierre Celestin Victor Baud and Theodore Casimir Delamarre.*)	2587	21st Oct. 1863	Richard Archibald Broman.
Manufacture of nitrate of potash - - -	2758	6th Nov. 1863	Joseph Townsend.
Flour dressing machines termed "silk reels" -	2843	14th Nov. 1863	Joseph Ellison.
Method of driving and feeding cotton gins, and of conveying away the ginned cotton and seeds therefrom - - - - - -	2863	16th Nov. 1863	Evan Leigh. Frederick Allen Leigh.
Machinery for thrashing and screening wheat and other grain.	3052	4th Dec. 1863	Richard Hornsby, junior.
Improved machinery for the treatment of tow and other fibrous substances.	3112	10th Dec. 1863	Morritz Friedlander.
Improvements in the manufacture of certain descriptions of artificial manure and in apparatus to be employed therein. (*Sifting ashes.*)	3264	24th Dec. 1863	John Maynes.
SIGNALS, ALARMS, COMMUNICATING-APPARATUS.			
Apparatus for signalling on railways by detonating or explosive signals.	69	8th Jan. 1863	Cecil Allen.
Alarums for portable and stationary uses - -	77	9th Jan. 1863	Matthew Cartwright.
Railway signals - - - - -	93	12th Jan. 1863	Edwin Daniel Chattaway.
An improved alarum apparatus which may be employed in connection with locks or other fastenings. (*Communicated by George Henry Sanborn.*)	131	15th Jan. 1863	Thomas Critchley Barraclough.
Improvements in apparatus for casting or moulding articles in glass and in imitation of precious stones or marbles. (*Lanterns for signals.*)	184	21st Jan. 1863	Adolphe Boubee.
Improvements in apparatus to be used on railways to indicate to the engine driver of a carriage train the length of time which has intervened since the passing of a previous train.	189	21st Jan. 1863	Sir Coutts Lindsay.
Improvements in the means of communicating signals on board ship, and of indicating the position of the rudder.	210	23rd Jan. 1863	Frederic Newton Gisborne.
Looms for weaving - - - - (*Indicating when weft breaks.*)	218	24th Jan. 1863	Ellis Shackleton.
Safety apparatus for steam-boilers - -	229	26th Jan. 1863	James Fyfe.
An improved spring catch or fastening applicable to windows and other useful purposes. (*To railway signals.*)	318	4th Feb. 1863	William Thomas Weston.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SHIP BUILDING, &c.—*continued.*			
Improvements in the construction of ships of war and other vessels, and in masting or rigging the same.	2673	28th Oct. 1863	John Kennedy.
An improved composition for coating ships' bottoms	2680	30th Oct. 1863	Frederic Newton Gisborne.
Apparatus for sustaining and raising ships or vessels, applicable also as life buoys.	2688	30th Oct. 1863	George Rosselet.
Improvements in the construction of iron and other ships, vessels and batteries of war, and of cupolas and armour plates applicable thereto, parts of which improvements are also applicable to other useful purposes.	2690	30th Oct. 1863	Barnabas Russ.
Building ships and vessels - - -	2703	31st Oct. 1863	John Getty.
Application of preservative coatings or compositions to the bottoms of ships and vessels.	2732	4th Nov. 1863	John Hornby Maw.
Machinery for cutting and planing iron and other metals, particularly applicable to machinery for cutting and planing armour plates - -	2735	5th Nov. 1863	Greenwood Craven. William Craven. John Craven.
Improvements in fastening together the parts of ships and vessels, and in respect to the more efficient caulking of the seams thereof.	2756	6th Nov. 1863	Robert Saunders.
Construction of ships and vessels - - - (*Communicated by William Keld Whytehead.*)	2783	9th Nov. 1863	George Tomlinson Bousfield.
Improvements in preventing the fouling of the bottoms and sides of ships and vessels, particularly applicable to ships and vessels constructed of or sheathed with iron.	2847	14th Nov. 1863	Adolf Ellissen.
Construction of armour for ships of war and land batteries.	2848	14th Nov. 1863	Thomas Symes Prideaux.
Sheathing ships and other vessels - - -	2880	17th Nov. 1863	Joseph Betteley.
Ships or vessels for war and other purposes -	2895	18th Nov. 1863	Patrick St. George Græme.
Construction of gun boats, gun vessels and rams -	2922	20th Nov. 1863	Alexander M^{c}Laine.
An improved composition for coating or covering the bottoms of ships.	2945	23rd Nov. 1863	James Smith.
Compositions applicable to the coating of ships' bottoms.	2974	26th Nov. 1863	James Baker.
Improvements in ships of war and in arming ships of war.	2995	30th Nov. 1863	Augusto Albini.
Compounds or compositions for coating or covering iron or wooden ships and vessels, metallic sheathing, telegraph cables and other objects, to preserve them from decay, fouling or other destructive action - - - -	3012	1st Dec. 1863	Jesse Gustavus Redman. George Martin.
Sheathing iron vessels and armour plated ships -	3014	1st Dec. 1863	Robert Turnbull.
Improvements in apparatus for mounting and working guns used in ships and other floating vessels, and in fortifications.	3016	1st Dec. 1863	Edward Augustus Inglefield.
Construction of ships of war and other vessels -	3036	2nd Dec. 1863	Charles Lungley.
An improved composition for covering steam-boilers and pipes and other surfaces. (*Iron ship's side.*)	3082	8th Dec. 1863	Henry Benson James.
Improvements in presses for bending metal plates into the various forms required in naval architecture and for other purposes. (*Communicated by John Cochrane.*)	3110	10th Dec. 1863	William Galloway. John Galloway.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SIGNALS, &c.—*continued.*			
An improved method of breaking the speed of and stopping railway trains or other locomotive wheeled carriage or carriages, at the same time signalling to the driver, or for using the signal and break separately.	1851	24th July 1863	William Lawson Barnes, M.A.
A new and improved means of railway signalling -	1930	5th Aug. 1863	George Wilkins.
Certain improvements in machinery for preparing, spinning and doubling cotton and other fibrous substances. (*Self-acting alarm.*)	1976	11th Aug. 1863	William Knowles. Robert Halliwell.
Improved means of conducting electric currents through railway trains, and of actuating signals or alarums therein.	2007	14th Aug. 1863	Andrew Edmund Brae.
Improved means of communication between the passengers, guard and driver of a railway train in motion.	2076	21st Aug. 1863	Thomas Frederick Cashin.
Improvements in the manufacture and construction of fences, part of which are also applicable to the manufacture and construction of gate posts, and to poles and posts used for telegraph and signal purposes, and for stretching telegraph wires.	2192	5th Sept. 1863	Joseph Rowell.
Safety lamps for mines - - - - (*May be used as alarms.*) (*Communicated by François Chapuis and Léonce Decombette.*)	2256	14th Sept. 1863	William Edward Gedge.
Apparatus applied to railway carriages and trains in order to obtain greater safety to passengers.	2285	17th Sept. 1863	John Gottlieb Ulrich.
Improvements in railway telegraphs and signals, and also in the permanent way and carriages, for preventing railway accidents.	2332	21st Sept. 1863	Wilhelm Adolf Von Kang
Marine fog signals or alarums - - -	2962	24th Nov. 1863	Celadon Leeds Daboll.
Improvements in apparatus for working railway signals, and for raising and lowering signal lamps. (*Communicated by Jean Joseph Baranowski.*)	3178	16th Dec. 1863	Richard Archibald Brooman.
Improvements in the means of communicating signals on board ship, on railways and for other purposes.	3208	19th Dec. 1863	Frederic Newton Gisborne.
Improved means of communication between the guard and engine driver of a railway train.	3235	22nd Dec. 1863	Joseph Grindley Rowe.
SINGEING PIGS.			
Machinery or apparatus for singeing pigs - - (*By gas.*)	425	16th Feb. 1863	Thomas Wilkinson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SIZING, WARPING, BEAMING AND PREPARING YARNS FOR WEAVING.			
Warping or beaming machines	34	5th Jan. 1863	John Howard. John Bullough.
Winding, warping, beaming or dressing machines	81	9th Jan. 1863	William Harrison Morcland. John Chappell.
Preparing cotton for the operations of spinning and weaving.	302	3rd Feb. 1863	George Holcroft.
Construction of creels for warping machines and other machines to which creels are applied.	398	14th Feb. 1863	Rowland Baguley.
Certain improvements in machinery or apparatus for warping or beaming yarns or threads	452	19th Feb. 1863	Thomas Markland. John Charles Dickinson.
Improvements in warp dressing and in apparatus connected therewith. (*Communicated by Peter Garvie.*)	601	3rd March 1863	James Pollard.
Back beam warping machines	673	11th March 1863	William Rossetter.
Certain improvements in looms for weaving (*Communicated by Alexander Frey.*)	680	13th March 1863	Henry Bernoulli Barlow.
Certain improvements in machinery for reeling, winding, warping and beaming yarn.	725	18th March 1863	William Edward Taylor.
Improved compounds or compositions for sizing, stiffening and coloring yarns and textile fabrics.	893	9th April 1863	David James Cooke.
Improvements in the action and arrangement of machines for winding cops, in the construction and arrangement of banks for holding cops for warping purposes, in the formation of shuttles for receiving cops, and for apparatus for packing and securing cops in shuttles, one part of which improvements consisting of a spring clutch is applicable to machines in general	937	14th April 1863	John Combe. John Henry Smalpage.
Balling motions (*Balling warps.*)	1061	28th April 1863	Samuel Crabtree.
Machinery for preparing, dressing and winding cotton, woollen, flax, silk and other warps. (*Communicated by Pierre François Dacheux and Gustave Lefebvre.*)	1197	12th May 1863	Richard Archibald Brooman.
Machinery for weaving, sizing, dressing and dyeing	1201	13th May 1863	Thomas Parkinson. Francis Taylor.
An improved combination of materials to be employed for the purposes of sizing and stiffening.	1467	12th June 1863	Joseph Place.
Sizing or preparing warps	1563	22nd June 1863	Alexander Twaddell.
Improvements in twisting machines particularly applicable to the manufacture of strings, strands, ropes or cables. (*And for warping.*)	1601	25th June 1863	Jules Ouarnier Mathieu.
Sizing or gumming warp and weft threads (*Communicated by Stanislas Vigoureux.*)	1750	13th July 1863	Richard Archibald Brooman.
Machinery for winding, measuring, and sizing silk (*See* "SIFTING.") (*Communicated by Emile Duseigneur.*)	1801	17th July 1863	Richard Coenen.
Machinery or apparatus for sizing and drying yarns and fabrics	1810	20th July 1863	Robert Benjamin Brassey. James Hargreaves.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SIZING, &c.—*continued.*			
Improvements in making all woven and thready fabrics waterproof, and in finishing or surfacing fabrics generally. (*Warps and weft.*) (*Communicated by Etienne Guillaume.*)	1836	22nd July 1863	Charles Bealay.
Improvements in sizing and finishing fabrics, and in the machinery or apparatus employed therein.	1861	27th July 1863	John Wellington Welch.
Improvements in sizing or dressing and in drying fibrous materials or fabrics, and in apparatus therefor.	3137	12th Dec. 1863	Joseph Townsend.
Apparatus for forcing size or other glutinous substances through pipes, to supply machines for sizing yarns, cloths or other materials.	3225	21st Dec. 1863	James Eastwood.
SMOKE PREVENTION; BURNING AND CONDENSING SMOKE; SAVING FUEL.			
Apparatus for curing smoky chimneys - -	28	3rd Jan. 1863	Charles Butler Clough.
Improvements in apparatus for sweeping or cleaning chimneys, and also in apparatus for preventing chimneys from smoking.	124	14th Jan. 1863	George Holt.
Heating arrangements of stoves for drying woven fabrics.	244	28th Jan. 1863	Horatio Watson.
Apparatus for steaming, cooking and generating gas - - - - - - - - (*Saving fuel.*)	248	28th Jan. 1863	John Oglesby. John Dickinson. William Mark Dickinson John Dickinson the younger.
Improved apparatus for cleansing chimneys or other flues. (*Communicated by Eutrope Malavergne.*)	278	30th Jan. 1863	William Edward Gedge.
An improved hot air stove where peat charcoal is the fuel employed, and for the method of using peat charcoal or other suitable fuel in connection with the said stove or other stoves, for the purpose of purifying or filtering the gaseous products of combustion.	315	4th Feb. 1863	Joseph Judge Hays.
An improved hot air stove - - -	368	11th Feb. 1863	Alfred Corneau.
Stoves or fire-places for warming apartments -	436	17th Feb. 1863	Henry Tomlinson.
Cooking stoves - - - - - -	443	18th Feb. 1863	John Henry Bly.
Construction of furnaces - - - -	568	28th Feb. 1863	Stephen Williamson.
An improved stove or fire-grate for heating, cooking, boiling or other similar purposes.	702	16th March 1863	Felix Hoyos.
Apparatus for the purpose of clearing out the interior of foul chimneys or flues when on fire or otherwise - - - - - -	740	19th March 1863	Charles Webster. William Forgie.
Improvements in furnaces or fire-places and in apparatus to be used in connection therewith. (*Communicated by Louis Herbert.*)	796	26th March 1863	John Henry Johnson.
Improvements in furnaces and fire-places having for object the consumption or prevention of smoke.	850	2nd April 1863	Jerome Jean Potél.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SMOKE, &c.—*continued.*			
Preventing the escape of fumes and matters from furnaces	898	9th April 1863	James Radley, junior. Duncan McColl.
Steam-boiler and other furnaces	916	11th April 1863	John Lockwood.
Improved method of condensing lead and other metallic fumes and vapours from furnaces.	1053	27th April 1863	Frederick Bennett.
Arrangement or construction of furnaces to render the combustion of the fuel more complete and to prevent the emission of smoke therefrom.	1147	7th May 1863	Jean Baptiste Pierre Alfred Thierry.
Construction of steam-boilers for marine, locomotive and stationary engines (*Economising fuel.*)	1243	18th May 1863	Alfred Heather. John Redfern.
Brick kilns (*Saving fuel.*)	1276	21st May 1863	Abraham Thomalley.
Improvements in coke ovens, and in building and heating ovens or retorts for generating coal gas connected therewith. (*Economising fuel.*)	1287	22nd May 1863	George Stevens.
An improved method of preventing incrustation of earthy matters in steam-boilers, steam generators and fuel economisers.	1384	3rd June 1863	John Travis.
Improvements in steam-boilers and furnaces for the consumption of smoke.	1394	4th June 1863	Hugh Rigby.
Prevention of smoke in steam-boilers and other furnaces. (*Communicated by Henry David Furness.*)	1475	12th June 1863	John Furness Tone.
Setting boilers (*Saving fuel.*)	1874	28th July 1863	John Jewell.
Ovens (*Saving fuel.*) (*Communicated by Jacques Blondel.*)	1942	6th Aug. 1863	William Clark.
Blast furnaces (*Saving fuel.*)	2012	14th Aug. 1863	Edward Brown Wilson.
Apparatus for attaching to steam-boilers and flues for the consumption of smoke.	2042	17th Aug. 1863	Thomas Loftus.
Improved arrangements for removing the fuel from stoves or grates, and for facilitating the extinguishing of the fires used therein. (*Saving fuel.*)	2149	31st Aug. 1863	Benjamin Lisle Burnett.
Furnaces	2185	4th Sept. 1863	John Hendry. William Coutts.
Steam-boilers	2188	5th Sept. 1863	George Hargreaves.
Steam-boiler and other furnaces	2221	9th Sept. 1863	John Robinson.
Improved means of and apparatus for employing vapours, gases and the heat derived from combustible matters.	2241	11th Sept. 1863	Louis Meyer.
An improved method of and apparatus for consuming smoke, and heating and warming public and other buildings, and for drying purposes generally.	2266	16th Sept. 1863	Gabriel Lewal.
Improvements in and application of apparatus for aiding the combustion of fuel.	2435	5th Oct. 1863	George Henry Ellis.
Improvements in refining crude pig iron and in furnaces connected therewith.	2477	9th Oct. 1863	George Parry.
An improved method of condensing and purifying the fumes and gases arising from the treatment of metals and metallic ores and substances.	2482	9th Oct. 1863	Richard Martyn.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SMOKE, &c.—*continued.*			
Improved apparatus for purifying waste gases from blast and other furnaces.	2485	10th Oct. 1863	John Vaughan.
Apparatus for condensing metallic and other fumes	2583	21st Oct. 1863	Gilbert Howell.
An improved burner for burning petroleum, paraffin or other hydro-carbon oils, consuming the smoke without the use of a draught chimney.	2614	23rd Oct. 1863	Alfred Joseph Martin.
Improvements in the application of steam combined with air as a motive-power and for other purposes.	2620	23rd Oct. 1863	James Parker.
Improvements in the manufacture of malleable iron and steel, and in the apparatus employed in such manufacture.	2746	5th Nov. 1863	Henry Bessemer.
An improved cowl or chimney pot - - (*Communicated by Yves Marie Pouliquen.*)	2792	10th Nov. 1863	Henri Adrien Bonneville.
Certain improvements in steam-boilers or generators	2890	18th Nov. 1863	John Stewart.
An improved apparatus for causing a stronger and better draught or current of air, so that house fires may be lighted or kindled in a very short space of time, for effecting a very considerable saving in fuel, and for throwing the heat from such fire into the building or room.	3024	2nd Dec. 1863	Thomas Snook.
Improved apparatus for curing smoky chimneys and preventing down draughts therein.	3026	2nd Dec. 1863	Jasper Capper.
Improvements in heating, parts of the invention being applicable to other purposes - -	3055	5th Dec. 1863	Samuel Alfred Varley. Cromwell Fleetwood Varley.
Generators for making gas from volatile fluids -	3136	12th Dec. 1863	Thomas Clayton.
Improvements applicable to steam-boilers for economising fuel.	3274	28th Dec. 1863	Thomas Hall.
SOAP.			
Treating rock oil, petroleum, paraffine oil, coal oil and paraffine, and other like mineral oils and products therefrom - - - -	247	28th Jan. 1863	Elijah Freeman Prentiss. John Carrington Sellars.
Improvements in polishing or giving a lustre to soap, and in the apparatus employed in such process. (*Communicated by Adolphe Dupuis.*)	592	3rd March 1863	George Davies.
Moulding articles of china or other clay or of other plastic materials. (*Soap.*)	1000	22nd April 1863	François Durand.
Manufacture of soap - - - -	1328	27th May 1863	Antoine Pascal Hermandez. Pierre Bélisaire Crespy.
Manufacture of candles and soap - - -	1507	16th June 1863	William Score.
Certain improvements in the mode of treating fatty bodies.	1778	16th July 1863	Hypolite Mège.
Manufacture of soap - - - - -	1800	17th July 1863	George Fergusson Wilson. George Payne.
Manufacture of soap - - - - -	2035	15th Aug. 1863	Augustus William Parker.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SOAP, &c.—*continued.*			
Manufacture of soap - - - (*Communicated by Guiseppe Negro.*)	2105	26th Aug. 1863	Joshua Taylor.
Manufacture of saponaceous compounds - -	2589	21st Oct. 1863	William Cooke.
Manufacture of soap - - - - (*Communicated by Jean Baptiste Vasseur and Alexis Mahot.*)	2696	30th Oct. 1863	John Henry Johnson.
Certain improvements in the manufacture of soap -	2781	9th Nov. 1863	Hippolyte Mège.
Manufacture of soap - - - -	3030	2nd Dec. 1863	Sanders Trotman.
SOWING SEEDS AND DISTRIBUTING MANURE.			
Drills or machines for depositing seed and manure	359	9th Feb. 1863	Henry Smith. John Smith.
Machinery for cultivating land and sowing seed -	688	13th March 1863	William Smith.
Agricultural apparatus - - - - (*Communicated by Jean Baptiste Décours, Athanase Charles Le Lavandier and Pierre Edouard Lambert.*)	767	23rd March 1863	William Clark.
Machinery and apparatus for preparing land for seed and for harrowing land - - -	807	27th March 1863	John King. Thomas Henry Marshall.
Manufacture of liquid manure drills - -	929	13th April 1863	Robert Reeves.
Apparatus for distributing manure - - -	1359	30th May 1863	John Heard.
Improvements in cutting and transplanting turf and in apparatus to be employed therein, which apparatus is also applicable to the extraction of weeds and to the planting of seeds, roots, sets or plants.	1370	1st June 1863	Charles Belcher.
An improved sowing and harrowing machine -	1672	6th July 1863	Andrew Gower. Benjamin Smyth Gower.
An improved corn and seed drill - -	1698	8th July 1863	Thomas Preece.
An improved agricultural implement for hoeing and cleaning the land, and for cutting or setting out the plant of root crops at certain distances from each other.	1884	30th July 1863	John William Branford.
Apparatus for tilling land - - - - (*And sowing.*)	2129	28th Aug. 1863	Charles Harratt.
Machinery for pulverizing and cleaning the soil, and scattering seed, guano, bone dust and other substances thereon.	2861	14th Nov. 1863	John Walmsley.
An improved agricultural implement for cultivating land and for sowing seed.	2873	16th Nov. 1863	Levi Lemon Sovereign.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SPINDLES; SPINDLES AND FLYERS.			
Improvements in machinery for lifting bobbins off spindles in spinning machines, and in lubricating spindles. (*Communicated by Louis François Filleul and Dominique Jarriel.*)	107	13th Jan. 1863	Richard Archibald Broman.
Machinery or apparatus for twisting or doubling yarns of wool or other fibrous substances.	919	11th April 1863	James Farrar.
Certain improvements in "flyers" to be employed in roving, slubbing and spinning cotton and other fibrous substances.	999	22nd April 1863	Thomas Settle.
Machinery for rolling, polishing, straightening and tapering round rods or bars of iron, steel and other metals - - - - - (*Tapering spindles.*)	1285	22nd May 1863	Joseph Jones Habershon, John Matthew Habershon, Matthew Henry Habershon.
Improvements in means of and apparatus for preparing, spinning, twisting and doubling wool, cotton and other fibrous substances, and in lubricating the spindles and other parts of machinery used in these and other operations.	1318	25th May 1863	Martyn John Roberts.
Certain improvements in "presser flyers" to be employed in preparing, spinning and doubling cotton and other fibrous materials.	2024	15th Aug. 1863	Robert Parker.
Improvements in machinery for rolling, shaping or forging metals, and in apparatus for grinding and polishing the same. (*Grinding spindles.*)	2506	13th Oct. 1863	James Dodge.
Machinery or apparatus for preparing, spinning and doubling cotton, flax, wool and other fibrous materials. (*Bearings of spindles.*)	2552	19th Oct. 1863	James Champion.
Improvements applicable to the machinery used for spinning hemp, flax, manilla, wool and other like long fibrous material, from the hand or when previously formed into a "sliver."	2617	23rd Oct. 1863	James Ronald.
An improved apparatus for the lubrication of bearings, shafts, or other parts of machinery subject to friction.	2723	4th Nov. 1863	Pierre Augustin Sautreuil.
Improvements in testing or measuring the strength and other properties of various materials and structures, and in apparatus therefor. (*Spindles.*)	2970	26th Nov. 1863	David Kirkaldy.
Improvements in lubricating the shafts of the conducting pulleys of mules, which improvements are also applicable to machinery in general.	3028	2nd Dec. 1863	Thomas Thornber England.
Certain improvements in the method of manufacturing spindles and "skewers" to be employed in spinning fibrous substances, and in apparatus connected therewith.	3084	8th Dec. 1863	Joseph Wray.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SPINNING AND PREPARING FOR SPINNING.			
I.—Opening, Ginning, Breaking and Cleaning Fibrous Materials.			
Machinery for clearing and separating the woody parts from the fibrous portion of flax, hemp or other like material - - - -	39	5th Jan. 1863	David Nevin. William Coppin.
Improved machinery for breaking and cleaning flax, hemp and other fibre yielding plants. (*Communicated by Gelston Sanford and James Edward Mallory.*)	68	8th Jan. 1863	Alexander Guild.
Machinery or apparatus for cleaning and preparing cotton or other fibrous materials to be spun.	80	9th Jan. 1863	Daniel Collinge.
Willowing and opening cotton and other fibrous substances.	183	21st Jan. 1863	James Holt.
Preparing cotton for the operations of spinning and weaving.	302	3rd Feb. 1863	George Holcroft.
Machinery or apparatus for cleaning cotton from seeds - - - - - - -	445	18th Feb. 1863	John Platt. William Richardson.
Machinery or apparatus employed in the preparation or treatment of hemp and other textile materials. (*Communicated by François Jules Vignaud.*)	561	27th Feb. 1863	John Henry Johnson.
Machinery or apparatus for cleaning, steaming and preparing cotton or other fibrous materials to be spun.	569	28th Feb. 1863	Daniel Collinge.
Treatment of certain fibrous vegetable substances with a view to the production of textile materials therefrom. (*Communicated by Vittorio Secondo Ferrero.*)	658	9th March 1863	John Henry Johnson.
Cleaning and preparing cotton for spinning -	659	11th March 1863	Henry Fletcher.
Machinery for beating and drying wool and other textile and filamentous substances. (*Communicated by Louis César Carlier Vitu.*)	746	20th March 1863	Richard Archibald Brooman.
Machinery for scouring wool - - - (*Communicated by Jean Henri Chaudet and Firmin Natalis Thuillier.*)	803	27th March 1863	Richard Archibald Brooman.
Machinery for ginning cotton - - -	833	31st March 1863	John Macmillan Dunlop.
Treatment or preparation and manufacture of jute, hemp, flax and other fibrous or textile materials.	852	2nd April 1863	George Addison Cox.
A new composition for dressing and preparing silk, cotton and woollen tissues and fibres, and also mixtures of the same. (*Communicated by Jacques Mathevon.*)	873	7th April 1863	Henry Gilbee.
Preparing and bleaching jute and other vegetable fibres for spinning and other purposes.	886	8th April 1863	Thomas Gray.
Machinery for opening, cleaning, carding and grinding or sharpening cards used in preparing cotton and other fibrous materials - -	932	13th April 1863	Thomas Mallinson. Peter Williams.
Improvements in preparing and bleaching flax, hemp and other vegetable fibres, by which a brilliant lustre is imparted to those substances and the fibres are separated. (*Preparing for spinning.*)	945	15th April 1863	Thomas Gray.
Improvements in cotton gins and in the method of driving the same, part of which improvements is applicable to other purposes - -	1079	29th April 1863	Evan Leigh. Frederick Allen Leigh.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SPINNING, &c.—*continued.*			
Apparatus for manufacturing saws suitable for ginning cotton and for other uses. (*Communicated by George Washington Emery.*)	1194	12th May 1863	Horace Leeman Emery.
Improvements in preparing and spinning flax and other vegetable fibres and filaments, and in machinery employed therein.	1235	16th May 1863	Joseph Gibbs.
Treatment of certain vegetable fibres for the preparation of textile materials therefrom.	1252	19th May 1863	Ferrar Fenton.
Improvements in treating flax and other fibrous plants in order to prepare the fibres thereof for spinning, and in apparatus employed therein.	1254	19th May 1863	Henry John Olding.
Extracting the fibre from zostera marina and other aquatic vegetable productions.	1271	21st May 1863	James Steart.
Certain improvements in apparatus called "gins" for cleansing seed cotton.	1323	26th May 1863	Edward Kenworthy Dutton.
Certain improvements in machines for separating the fibre from the flesh of plants. (*Communicated by Eduardo Juanes y Patrullo.*)	1327	26th May 1863	William Edward Newton.
Machines for "ginning" cotton - - - (*Communicated by Jules Alfred Chaufourier.*)	1387	3rd June 1863	George Davies.
Treating flax, hemp and other vegetable fibrous substances in order to bleach and separate the fibres.	1403	5th June 1863	Thomas Gray.
Machinery for burring, ginning, cleaning and carding cotton and other fibrous substances -	1465	12th June 1863	Francis Alton Calvert. Francis Calvert.
Machinery for opening and cleaning cotton and other fibrous substances. (*Communicated by John Edo Van Winkle.*)	1494	15th June 1863	Henry Bernoulli Barlow.
Certain improvements in apparatus for steaming cotton or other fibrous substances - -	1533	19th June 1863	Edmund Howarth. John Brown.
Machinery for opening, cleaning and preparing fibrous substances.	1809	20th July 1863	Francis Alton Calvert.
Machinery for opening, carding and cleaning cotton and other fibrous materials when in a manufactured or partly manufactured state.	1811	20th July 1863	Thomas Knowles.
Improved machinery for breaking or softening and preparing flax, hemp, jute, tow and other fibrous substances.	1823	21st July 1863	William Lyle Aberdein.
Improvements in and apparatus for dressing or preparing for spinning hemp, flax, manilla-hemp and other like fibrous material.	1833	22nd July 1863	James Ronald.
Certain improvements in the method of preparing and treating "codilla fibre" and "tow," to render them available as a substitute for cotton or to be mixed therewith.	1905	1st Aug. 1863	John Hoefler.
Machinery or apparatus for cleaning cotton and wool from seeds, burrs or other such extraneous matters - - - - - -	2070	20th Aug. 1863	John Platt. William Richardson.
An improved double MacCarty gin or machinery used for cleaning cotton from its seeds.	2094	24th Aug. 1863	Claude Sosthène Grasset.
Improvements in and applicable to cotton gins -	2133	29th Aug. 1863	George Lowry.
Machinery or apparatus for steaming and opening cotton and other fibrous materials.	2136	29th Aug. 1863	Thomas Williams.
Certain improvements in apparatus for preparing cotton and other fibrous materials for spinning.	2215	9th Sept. 1863	William Higgs Hawksworth.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SPINNING, &c.—*continued.*			
Means of utilizing refuse azoted matters of commerce for the manufacture of various chemical products. (*Recovering fibres for spinning.*) (*Communicated by Amédée Gélis and Lucien Dusart.*)	2222	9th Sept. 1863	William Clark.
An improved method of preparing the fibres of hemp, flax and other vegetable materials for manufacturing purposes.	2258	14th Sept. 1863	George Whitfield Billings.
Improvements in machinery or apparatus for ginning cotton, also for cleaning, opening and preparing cotton, wool or other fibrous substances.	2310	19th Sept. 1863	Charles Louis Fleischmann.
An improved construction of cotton gin - -	2504	12th Oct. 1863	George Mountford.
Cotton gins - - - - -	2511	13th Oct. 1863	Thomas Cowall Craven.
Machinery or apparatus for opening, cleaning and mixing cotton or other fibrous materials -	2559	20th Oct. 1863	James Taylor. James Lees. John Lees.
An improved treatment of textile substances to obtain a species of or substitute for cotton. (*Communicated by Joseph Jaubert.*)	2560	20th Oct. 1863	Ernest Henry Luebbers.
Improvements in preparing and cleansing vegetable fibres, and in machinery employed therein.	2605	22nd Oct. 1863	Charles James Pownall.
Apparatus for opening and conditioning cotton and other fibrous substances.	2660	28th Oct. 1863	William Wanklyn.
Cotton gins - - - - -	2686	30th Oct. 1863	François Durand.
Apparatus for oiling wool - - -	2687	30th Oct. 1863	Martyn John Roberts.
Certain improvements in apparatus for coating or covering the surfaces of rollers or cylinders with leather or other material. (*Cotton gins.*)	2737	5th Nov. 1863	Edward Kenworthy Dutton.
Improvements in machinery for ginning and cleaning cotton, a part of which are applicable to machines for other purposes.	2765	7th Nov. 1863	Horace Leeman Emery.
Improvements applicable to machinery for opening, cleaning, preparing and carding wool and other fibrous substances.	2808	11th Nov. 1863	William Clissold.
Cotton gins on the roller principle - -	2844	14th Nov. 1863	John Charles Wilson.
Mills for cleaning cotton seed - - - (*See* "THRASHING.")	2857	14th Nov. 1863	James Harrison.
Method of driving and feeding cotton gins, and of conveying away the ginned cotton and seeds therefrom - - - - - -	2863	16th Nov. 1863	Evan Leigh. Frederick Allen Leigh.
Machinery for ginning cotton and for opening cotton and other fibrous substances - -	2915	20th Nov. 1863	Benjamin Dobson. Edward Barlow. Peter Knowles.
Machinery for breaking and cleaning flax, hemp and other fibre yielding plants. (*Communicated by James Edward Mallory and Gelston Sanford.*)	2958	24th Nov. 1863	William Edward Newton.
Manufacture of paper, thread, cordage and fabrics from beetroot.	2967	25th Nov. 1863	Louis Accarain.
Machinery or apparatus for opening, cleaning and preparing cotton and other fibrous materials to be spun.	3056	5th Dec. 1863	James Conlong.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SPINNING, &c.—*continued.*			
Construction of machinery for ginning cotton -	3079	8th Dec. 1863	William Wanklyn.
Improved machinery for the treatment of tow and other fibrous substances.	3112	10th Dec. 1863	Morritz Friedlander.
An improved rag machine cylinder or swift and tooth of an improved principle, for the purpose of pulling up woollen and cotton rags, silk rags, hair bagging, and for cleaning and opening wools and waste, and for the pulling up of fibrous substances in the rag - - -	3113	10th Dec. 1863	Alexander Reid. George Rydill.
Certain improvements in machinery for opening and scutching cotton and other fibrous substances.	3201	19th Dec. 1863	William Noton.
Construction of cotton gins - - - (*Communicated by Enoch Osgood.*)	3230	21st Dec. 1863	Alfred Vincent Newton.
Improvements in and apparatus for the conversion of ropes and other cordage into oakum, tow and paper stuff, parts of which are applicable to teasing and cleaning wool or hair on skins, and dressing "waste" tow, wool, hair and other "waste" fibres.	3246	23rd Dec. 1863	James Ronald.
Cotton gins - - - - - (*Communicated by Israel Fanning Brown.*)	3283	29th Dec. 1863	Theodore Bourne.
Cotton gins - - - - -	3286	29th Dec. 1863	Henry Bayley.
Machinery or apparatus for softening and separating the fibres of fibrous materials - -	3287	29th Dec. 1863	William Whitaker. William Tongue.
Manufacture of rollers or cylinders in which a certain degree of elasticity is required - - (*For cotton gins.*)	3301	30th Dec. 1863	John Platt. William Richardson.
II.—Carding, Combing and Heckling Fibrous Materials; Making Cards.			
Carding-engines - - - - - (*Communicated by Jean Jacques Bourcart.*)	96	12th Jan. 1863	William Clark.
Machinery for spreading, drawing and carding flax and other fibrous substances.	153	17th Jan. 1863	John Combe.
Certain improvements in the construction of carding-engines - - - - -	168	20th Jan. 1863	John Bell. John Speight.
Certain improvements in machinery or apparatus for grinding or pointing the "cards" employed in carding-engines - - - -	217	24th Jan. 1863	William Allen. William Johnson.
Machines for carding fibrous materials - - (*Communicated by Henry Bosshard.*)	225	24th Jan. 1863	Frederick Tolhausen.
Carding-engines - - - - -	245	28th Jan. 1863	Thomas Parkinson.
Certain improvements in carding-engines - -	303	3rd Feb. 1863	Samuel Oddy. Edward Oldfield.
Machinery for supplying and spreading wool and other filamentous materials on belts, tables and other surfaces, to be afterwards carded and otherwise acted on. (*Communicated by Jean Joseph Jules Pierrard.*)	328	5th Feb. 1863	Richard Archibald Br - man.
Improvements in carding-engines whereby slivers are formed into threads ready for spinning. (*Communicated by François Jacques Grün and Henri Gand.*)	337	6th Feb. 1863	Richard Archibald Br - man.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SPINNING, &c.—*continued.*			
Certain improvements in carding-engines (*Communicated by John Lees Wrigley.*)	354	9th Feb. 1863	Benjamin Dobson. Edward Barlow.
Improvements in carding-engines for carding and drawing flax tow, in part applicable to carding cotton or other fibrous substances	361	10th Feb. 1863	James Crosby. John Burns Smith.
Improvements in carding-engines and in apparatus connected therewith	410	14th Feb. 1863	James Higgins. Henry Higgins.
Machinery for carding and combing flax, wool, cotton and other fibrous substances.	492	23rd Feb. 1863	Thomas Richards Harding.
Machinery or apparatus for preparing wool or other fibrous substances for spinning	616	5th March 1863	Thomas Thornton. Edwin Thornton. Robert Thornton.
Certain improvements in machinery or apparatus for grinding "cards" employed in carding-engines	618	5th March 1863	William Allen. William Johnson.
Machinery or apparatus for combing cotton and other fibrous materials.	758	21st March 1863	John Muir Hetherington.
An improvement in carding-engines	811	28th March 1863	James Leeming. Richard Shiers Markindale.
Carding-engines	834	1st April 1863	John Smalley Grimshaw.
Treatment or preparation and manufacture of jute, hemp, flax and other fibrous or textile materials. (*Hackling.*)	852	2nd April 1863	George Addison Cox.
Improved apparatus for feeding scribbling or carding engines.	865	6th April 1863	Benjamin Cooper.
Machinery for combing or dressing silk, flax, wool, hemp, china grass or other fibrous materials.	866	6th April 1863	Taylor Burrow.
Machinery for carding cotton and other fibrous substances	869	6th April 1863	John Railton. Henry Booth.
Machinery for opening, cleaning, carding, and grinding or sharpening cards used in preparing cotton and other fibrous materials	932	13th April 1863	Thomas Mallinson. Peter Williams.
Machinery for carding cotton and other fibrous substances	933	14th April 1863	John Nasmith. Samuel Thornton.
Certain improvements in carding-engines to be employed for carding cotton and other fibrous substances.	1070	28th April 1863	Richard Butterworth.
Construction of mechanism applicable to looms and partly to carding engines and other machinery.	1141	7th May 1863	John Walker.
Machinery for feeding slivers of wool and other material to carding-engines	1153	8th May 1863	Charles Lloyd Braithwaite. Joseph Hirst.
Combs for combing wool by machinery	1228	16th May 1863	Richard Waddington. William Waddington. Thomas Waddington.
Certain improvements in machinery or apparatus for preparing cotton and other fibrous substances	1429	9th June 1863	Benjamin Dobson. Daniel Greenhalgh.
Certain improvements in machinery for grinding card teeth	1430	9th June 1863	Edward Barlow. James Newhouse. Francis Hamilton. William Hope.
Machinery for burring, ginning, cleaning and carding cotton and other fibrous substances	1465	12th June 1863	Francis Alton Calvert. Francis Calvert.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee
SPINNING, &c.—*continued.*			
Machinery for combing wool and other fibrous material.	1537	19th June 1863	Augustin Morel.
A new and useful machine for preparing cotton, wool or other fibrous material. (*Communicated by Cullen Whipple.*)	1643	1st July 1863	George Tomlinson Bousfield.
Machinery for opening, cleaning and preparing fibrous substances.	1809	20th July 1863	Francis Alton Calvert.
Machinery for opening, carding and cleaning cotton and other fibrous materials when in a manufactured or partly manufactured state.	1811	20th July 1863	Thomas Knowles.
Improvements in and apparatus for dressing or preparing for spinning hemp, flax, manilla-hemp and other like fibrous material.	1833	22nd July 1863	James Ronald.
Machinery or apparatus for feeding wool, cotton and other fibrous materials into machines for preparing the same for spinning.	1927	4th Aug. 1863	Thomas Pickersgill.
Engines for carding cotton and other fibrous materials - - - -	1959	7th Aug. 1863	John Thompson. Edward Gerrard Fitton. Frederick Alexander Fitton.
Certain improvements in machinery for preparing, spinning and doubling cotton and other fibrous substances - - - -	1976	11th Aug. 1863	William Knowles. Robert Halliwell.
A new method of and apparatus for feeding wool and other textile and filamentous substances into carding, combing and other machines for treating such substances. (*Communicated by Jean Sebastien Bolette.*)	2171	2nd Sept. 1863	Emile Alcan.
Machinery for preparing and spinning cotton and other fibrous substances - - -	2197	7th Sept. 1863	Frederick Mills. Thomas Booth. Thomas Clegg.
Certain improvements in apparatus for preparing cotton and other fibrous materials for spinning.	2215	9th Sept. 1863	William Higgs Hawksworth.
An improvement in piecing machines - -	2240	11th Sept. 1863	Joseph Rhodes.
Improvements in condensers applicable to wool carding-engines. (*Communicated by Leon Gauchez.*)	2324	21st Sept. 1863	Emile Alcan.
Machinery for combing wool and other fibrous materials. (*Partly communicated by Isaac Bailey.*)	2434	5th Oct. 1863	William Henry Bailey.
Machinery for carding cotton and other fibrous materials - - - -	2584	21st Oct. 1863	Thomas Hodson. William Nightingale. Robert Laird.
Improvements in the manufactures of brushes used in machines employed for preparing and combing wool, cotton, silk and other fibrous substances - - - - -	2647	26th Oct. 1863	Edward Clifton. Benjamin Greenwood.
Machinery for combing wool and other fibrous substances.	2718	3rd Nov. 1863	Samuel Bateman.
Apparatus for grinding cards used in carding-engines	2795	10th Nov. 1863	Samuel Faulkner. John Berry. George Harrison.
Carding-engines - - - -	2796	10th Nov. 1863	Samuel Faulkner.
Improvements applicable to machinery for opening, cleaning, preparing and carding wool and other fibrous substances.	2808	11th Nov. 1863	William Clissold.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SPINNING, &c.—*continued.*			
Machinery for preparing cotton to be spun - -	2906	19th Nov. 1863	Richard Walker. John Scholes Walker. Benjamin Brown.
Certain improvements in carding-engines - -	3047	4th Dec. 1863	Robert Riley.
Improvements in or applicable to machinery for preparing and combing wool and other fibrous substances.	3074	7th Dec. 1863	Edward Clifton.
Machinery or apparatus for carding wool or other fibrous substances - - -	3091	8th Dec. 1863	Henry Eastwood. Benjamin Matthews.
Improved machinery for the treatment of tow and other fibrous substances.	3112	10th Dec. 1863	Morritz Friedlander.
Certain improvements in machinery for carding cotton and other fibrous substances - -	3139	12th Dec. 1863	Benjamin Dobson. John Hodgkinson. Daniel Greenhalgh. Francis Hamilton.
Machinery or apparatus for combing wool and other fibrous substances.	3158	14th Dec. 1863	Benjamin Fothergill.
III.—Roving, Slubbing, Spinning, Twisting, Doubling and Throwing Fibrous Materials.			
Twisting and throwing silk and other fibres -	36	5th Jan. 1863	Antoine Monnet.
Winding or copping frames - - - (*Communicated by Jean Jacques Bourcart.*)	95	12th Jan. 1863	William Clark.
Improvements in machinery for lifting bobbins off spindles in spinning machines, and in lubricating spindles. (*Communicated by Louis François Filleul and Dominique Jarriel.*)	107	13th Jan. 1863	Richard Archibald Brooman.
Apparatus for holding castings and other pieces whilst being planed or shaped. (*Framings of spinning machines.*)	122	14th Jan. 1863	John Lawson.
Means or apparatus employed in spinning and weaving.	139	15th Jan. 1863	John Wright Child.
Improved slubs or rovings (in flax, hemp and other filamentous materials) produced by the slubbing frame and destined for fine spinning, as also for improved apparatus employed therein.	145	16th Jan. 1863	Lewis Verdure.
Machinery for spreading, drawing and carding flax and other fibrous substances.	153	17th Jan. 1863	John Combe.
Improvements in the preparation or manufacture of textile materials, and in the machinery or apparatus used therein. (*Winding into cops.*)	207	23rd Jan. 1863	Alexander Henderson.
New or improved apparatus for cleaning the beams of mules and spinning frames, collecting the dust and waste thereof, and also for cleaning the flooring underneath the mule carriages. (*Communicated by Edward Isler.*)	288	31st Jan. 1863	Frederick Tolhausen.
Preparing cotton for the operations of spinning and weaving.	302	3th Feb. 1863	George Holcroft.
Certain improvements in self-acting mules for spinning - - - - -	380	12th Feb. 1863	Emanuel Kemp. James Needham. Orlando Robinson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SPINNING, &c.—*continued.*			
Machines for spinning and doubling	392	13th Feb. 1863	William Robertson.
Machines for spinning and doubling	393	13th Feb. 1863	George Wrigley. Samuel Morris.
Certain improvements in machinery for preparing and doubling cott on and other fibrous substances	473	21st Feb. 1863	Henry Kilshaw. Thomas Elce, junior.
Spinning and doubling silk	487	23rd Feb. 1863	James Eckersley.
Machinery or apparatus for preparing cotton and other fibrous materials for spinning.	494	23rd Feb. 1863	John Tatham.
Improvements in throstle spinning and doubling frames, wholly or partly applicable to roving and slubbing frames	511	24th Feb. 1863	Thomas Mallinson. John Livingston.
Improvements in spinning, doubling, throwing and reeling silk, and in the machinery employed therein	549	27th Feb. 1863	John Houghton Albinson. Henry Hooton Cocker.
Machinery or apparatus for doubling or twisting yarn, thread, braid, rope or similar articles. (*Communicated by Jean Marie Daillon.*)	552	27th Feb. 1863	Edward Thomas Hughes.
Certain improvements in machinery or apparatus for preparing, spinning and doubling cotton and other fibrous substances	582	2nd March 1863	Edward Habel. Edmund Suckow.
Certain improvements in mules for spinning and doubling.	588	3rd March 1863	Thomas Emmott.
Machinery or apparatus for preparing wool or other fibrous substances for spinning	616	5th March 1863	Thomas Thornton. Edwin Thornton. Robert Thornton.
Improvements in apparatus for winding, cleaning, measuring, sorting, doubling, throwing and reeling silk, parts of which improvements are also applicable to like machinery for spinning, doubling and twisting cotton, wool and other fibrous materials.	674	12th March 1863	Frederick Buser Kraushaar.
Certain improvements in machinery or apparatus for preparing and spinning cotton and other fibrous substances	778	25th March 1863	John Leach. John Anderson.
Improvements in the manufacture of cords, ropes and cables, and in machinery employed therein, applilcabe also to spinning, winding, and twisting fibrous and filamentous substances. (*Communicated by Jean Antoine de Maniquet.*)	785	25th March 1863	Richard Archibald Brooman.
Winding or copping frames (*Communicated by Jean Jacques Bourcart.*)	805	27th March 1863	William Clark.
Machinery for preparing and printing wool and other fibres. (*Communicated by Stanislas Vigoureux.*)	913	10th April 1863	Henry William Ripley.
Machinery or apparatus for twisting or doubling yarns of wool or other fibrous substances.	919	11th April 1863	James Farrar.
Certain improvements in "flyers" to be employed in roving, slubbing and spinning cotton and other fibrous substances.	999	22nd April 1863	Thomas Settle.
Machinery for spinning and doubling	1013	23rd April 1863	Peter McGregor.
Certain parts of machinery for preparing and spinning cotton and other fibrous substances.	1028	25th April 1863	Charles Pooley.
Machinery for cleaning, sorting according to size and doubling silk and other threads.	1039	25th April 1863	Ira Dimock.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SPINNING, &c.—*continued.*			
Improvements in twisting and doubling silk, and in frames employed therein. (*Communicated by Auguste Tastevin.*)	1054	27th April 1863	Richard Archibald Brooman.
Balling motions - - - - - (*Balling slivers.*)	1061	28th April 1863	Samuel Crabtree.
Improvements in preparing and spinning flax and other vegetable fibres and filaments, and in machinery employed therein.	1235	16th May 1863	Joseph Gibbs.
Condensing machines for working yarns of wool and other fibrous substances.	1247	18th May 1863	Joseph Beaumont.
Machinery for twisting and doubling cotton, hemp, flax and other like fibrous materials.	1249	19th May 1863	Stephen Rhodes.
Paper spools or tubes used in spinning and doubling machines - - - - -	1266	20th May 1863	Thomas Williams. Isaac Naylor.
Machinery or apparatus for roving, spinning and doubling cotton and other fibrous materials -	1290	22nd May 1863	James Higgins. Thomas Schofield Whitworth.
Lap machines for preparing cotton and other fibrous substances - - - - -	1293	23rd May 1863	Edward Barlow. John Ashworth, junior. James Newhouse. Francis Hamilton. William Hope.
Improvements in means of and apparatus for preparing, spinning, twisting and doubling wool, cotton and other fibrous substances, and in lubricating the spindles and other parts of machinery used in these and other operations.	1318	25th May 1863	Martyn John Roberts.
Certain improvements in machinery or apparatus for preparing cotton and other fibrous substances - - - - -	1429	9th June 1863	Benjamin Dobson. Daniel Greenhalgh.
Machinery for drawing, slubbing, roving and spinning cotton and other fibrous material.	1459	11th June 1863	William Seed.
Machinery for spinning flax and other fibrous substances.	1498	15th June 1863	Robert Wilson Gordon.
Improvements in twisting and winding silk, and in the machinery or apparatus to be employed therein.	1524	18th June 1863	John Alexander Sparling.
Self-acting mules for spinning cotton and other fibrous materials - - - -	1526	18th June 1863	William Scowcroft Lowe. John Cheetham.
Improvements in slubbing, intermediate and roving frames, in the throstles and winding machines used for the manufacture of cotton or other fibrous materials - - - -	1577	23rd June 1863	James Ellison. Abraham Rogerson.
An invention having reference to bobbins and the winding of roving or yarn thereon.	1599	25th June 1863	Daniel Hussey.
Twisting machines particularly applicable to the manufacture of strings, strands, ropes or cables.	1601	25th June 1863	Jules Ouarnier Mathieu.
Improvements applicable to the rollers of machines employed for spinning fibrous materials whilst in a wet state.	1765	14th July 1863	James Logan Todd.
Certain improvements in machinery or apparatus for roving and spinning wool, cotton and other fibrous substances.	1768	15th July 1863	Thomas Wimpenny.
A new mechanical sector applicable to all self-acting machinery used for spinning textile fabrics.	1796	17th July 1863	Felix Lepoutre.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SPINNING, &c.—*continued.*			
Machinery for the manufacture of yarns, threads, laid twine and other cordage	1886	30th July 1863	Joseph Thompson Stephens. Charles Hoare.
Self-acting mules for spinning	1912	3rd Aug. 1863	Edward Alfred Cowper.
Certain improvements in machinery for preparing, spinning and doubling cotton and other fibrous substances	1976	11th Aug. 1863	William Knowles. Robert Halliwell.
Machinery or apparatus for doubling or twisting yarns or threads of cotton and other fibrous materials.	2017	14th Aug. 1863	John Wain.
Certain improvements in "presser flyers" to be employed in preparing, spinning and doubling cotton and other fibrous materials.	2024	15th Aug. 1863	Robert Parker.
Certain improvements in machinery for preparing, spinning and doubling cotton and other fibrous substances.	2026	15th Aug. 1863	Edward Lord.
Processes and preparations employed in spinning wool. (*Communicated by Edmund Lepainteur.*)	2039	17th Aug. 1863	Henri Adrien Bonneville.
Certain improvements in machinery for spinning cotton, flax, wool, silk, and other fibrous substances.	2059	19th Aug. 1863	Thomas Howard.
Machinery or apparatus for winding narrow laps of wool	2071	20th Aug. 1863	John Platt. William Richardson.
Preparing and spinning wool and other similar fibres	2090	22nd Aug. 1863	William Benson. Peter William Greenwood.
Apparatus for spinning	2103	26th Aug. 1863	James Thomas. William Fielding Marshall.
Machinery for preparing and spinning cotton and other fibrous substances	2197	7th Sept. 1863	Frederick Mills. Thomas Booth. Thomas Clegg.
Rollers to be used in machinery for spinning and manufacturing wool, cotton and other fibrous materials. (*Communicated by Amos Taylor.*)	2224	9th Sept. 1863	George Tomlinson Bousfield.
Certain improvements in mules for spinning cotton and other fibrous substances.	2307	19th Sept. 1863	John Buckley.
Machinery for making paper tubes used in spinning manufactories.	2366	25th Sept. 1863	Mathias Schaffhauser.
Machinery or apparatus for spinning and doubling wool, alpaca, mohair, cotton, silk, flax and other fibrous substances.	2412	2nd Oct. 1863	James Farrar.
Improvements in machinery for rolling, shaping or forging metals, and in apparatus for grinding and polishing the same. (*Grinding mule spindles.*)	2506	13th Oct. 1863	James Dodge.
Machinery or apparatus for preparing, spinning and doubling cotton, flax, wool and other fibrous materials.	2552	19th Oct. 1863	James Champion.
Certain improvements in mules for spinning and doubling.	2578	21st Oct. 863	William Hartcliffe.
Mules for spinning and doubling	2590	21st Oct. 1863	John Dodd.
Driving the spindles of doubling and spinning frames.	2616	23rd Oct. 1863	Joseph Thomas Webster.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SPINNING, &c.—*continued.*			
Improvements applicable to the machinery used for spinning hemp, flax, manilla, wool and other like long fibrous material, from the hand or when previously formed into a "sliver."	2617	23rd Oct. 1863	James Ronald.
Improvements in doubling yarns or threads of silk and other fibrous substances, and in the machinery employed therein.	2625	24th Oct. 1863	John Davidson.
Doubling and winding machines - - -	2656	27th Oct. 1863	Robert Smith.
Certain improvements in apparatus for applying adhesive substances to spindles employed in spinning cotton and other fibrous materials, and for the lubrication thereof.	2661	28th Oct. 1863	James Marshall.
Self-acting mules for spinning and doubling cotton and other fibrous materials.	2665	28th Oct. 1863	Edward Oldfield.
Machinery for doubling, twisting and winding silk and other fibrous substances.	2810	12th Nov. 1863	Barnaby Angelo Murray.
Means or apparatus employed in preparing and twisting cotton, wool and other fibrous materials.	2815	12th Nov. 1863	Alfred Illingworth.
Certain improvements in machinery for spinning and doubling.	2828	13th Nov. 1863	William Robertson.
Mules for spinning and doubling - - -	2838	13th Nov. 1863	Eli Spencer. John Dodd.
Paper spools or tubes used in spinning and doubling machines - - - - -	2860	14th Nov. 1863	Thomas Williams. Isaac Naylor.
The application of a certain substance or material for covering rollers used in spinning and preparing cotton, wool and other fibrous substances to be spun.	2914	20th Nov. 1863	Edward Marwood.
The production of thread, cordage and woven textile fabrics from prepared fibre of hemp or any of the plants known of the order or genus "Cannabis," and in mixing such prepared fibre with cotton, silk or animal wool - -	2950	24th Nov. 1863	St. George Gregg. Thomas Gray.
Certain self-acting mules for spinning and doubling cotton and other fibrous materials.	3019	1st Dec. 1863	Thomas Mallinson.
Improvements in lubricating the shafts of the conducting pulleys of mules, which improvements are also applicable to machinery in general.	3028	2nd Dec. 1863	ThomasThornber England.
Certain improvements in the method of manufacturing spindles and "skewers" to be employed in spinning fibrous substances, and in apparatus connected therewith.	3084	8th Dec. 1863	Joseph Wray.
Preparation or manufacture of cocoa nut fibre for matting purposes.	3125	11th Dec. 1863	Edward Shepherd.
Lathes for turning - - - - - (*Wharfs for spinning machinery.*)	3254	23rd Dec. 1863	Samuel Bradley Ardrey. Samuel Beckett. Walton Smith.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SPRINGS.			
Manufacture of elastic fabrics - - - (*Door springs, &c.*)	4	1st Jan. 1863	Matthias Edward Bown. Arthur Edward Franc.
An improved cover or protection for steel and other metal springs, ribbands and hoops. (*Communicated by Eugene Lange.*)	420	16th Feb. 1863	Richard Archibald Broo man.
Certain improvements in springs to be employed in the manufacture of beds, seats or for similar purposes where an elastic surface is required.	619	5th March 1863	Robert Doyne Dwyer.
An improvement in the manufacture of springs -	748	20th March 1863	George Wilson.
Improvements in the action and arrangement of machines for winding cops, in the construction and arrangement of banks for holding cops for warping purposes, in the formation of shuttles for receiving cops, and for apparatus for packing and securing cops in shuttles, one part of which improvements consisting of a spring clutch is applicable to machines in general - -	937	14th April 1863	John Combe. John Henry Smalpage.
A better and more economical mode of securing the bands of locomotive engine and tender springs, also a new method of applying the same - - - - - -	978	20th April 1863	Philip George Rowell. Henry Holt.
Improvements in springs to be used for railway buffers, draw hooks, and also for carrying springs of railway carriages and other vehicles -	1102	2nd May 1863	John William Gibson. William Turner.
Springs for railway carriages and other purposes - (*Communicated by Richard Vose.*)	1113	4th May 1863	George Haseltine.
Manufacture of trusses - - - -	1258	19th May 1863	Thomas Partridge Sa
An improved spring fastening - - -	1333	27th May 1863	Charles Gammon.
Thrashing machines - - - -	1718	9th July 1863	William Tasker th younger.
Watches and other time-keepers - - - (*Communicated by Adrien Philippe.*)	1828	21st July 1863	Richard Archibald Broo man.
Carriage and other springs - - -	1841	23rd July 1863	Andrew Taylor Holden.
Assistant bearing springs for locomotive engines, railway carriages, waggons and trucks.	2145	31st Aug. 1863	George Attock.
Hydraulic apparatus - - - - (*For testing springs.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Improvements in printing postage stamps, banker's bills, shares and other similar documents, and in machinery employed therein - -	2306	19th Sept. 1863	Louis François Cher Henry Jeremie Christ
An improved construction of walking stick umbrella. (*Spring coupling.*)	2577	20th Oct. 1863	Thomas Restell.
An improved mechanism for regulating the working of springs. (*Communicated by Georges Badaul.*)	2619	23rd Oct. 1863	Frederick Tolhausen.
Springs for railroad cars and other similar purposes (*Communicated by Augustus Ball Davis.*)	2817	12th Nov. 1863	George Davies.
Improvements in the manufacture of tubes, rings and cords of india-rubber, and in covering telegraph wires - - - - - (*Cords for springs.*)	2893	18th Nov. 1863	Josiah George Jennings Manuel Leopold Jos Lavater.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SPRINGS, &c.—*continued.*			
Improvements in the manufacture of door springs, part of which said improvements are applicable to the manufacture of weighing machines, steelyards, scale beams and other articles of like nature	2996	30th Nov. 1863	George Apdail Thompson the elder. George Apdail Thompson the younger. John Latham.
Railroad car springs	3007	1st Dec. 1863	Perry Green Gardiner.
STABLES, HORSE BOXES, FEEDING TROUGHS.			
Apparatus for feeding horses	419	16th Feb. 1863	Hugh Smith.
Bricks suitable for being used for paving stables and other places.	1375	2nd June 1863	George Hallen Cottam.
Apparatus for securing and protecting horses and other cattle during their transit by rail and other ways, and on board ship.	1852	24th July 1863	Abraham English.
Construction of feeding troughs for sheep and other cattle.	1876	29th July 1863	John Sainty.
Fastenings for doors (*Stable doors.*)	3109	9th Dec. 1863	Mark Hillary.
STAMPS AND DAMPERS; TICKETS; STAMPING, MARKING AND OBLITERATING; PERFORATING STAMPS.			
An improved method of and apparatus for damping and affixing postage stamps to letters.	240	27th Jan. 1863	Thomas Gordon.
Improvements in postage, revenue and other stamps, and in apparatus for post marking and cancelling postage and other stamps. (*Communicated by Marcus Porter Norton.*)	314	4th Feb. 1863	George Tomlinson Bousfield.
Manufacture of labels for luggage and other articles	798	26th March 1863	William Blake.
Certain improvements in the mode of finishing clasps and other such like metallic connectors, and which said mode of finish is also applicable for other purposes. (*Passe-partout frames.*)	1142	7th May 1863	Alfred Stanley.
A new double action self-feeding stamping and printing machine.	1308	25th May 1863	George Howell.
Manufacture of ornamental metal cylinders (*Striking out of a disc.*)	1314	25th May 1863	Thomas Spurrier.
Manufacture of cardboard or paper boxes or receptacles.	1356	29th May 1863	François Patureau.
Improved means of securing identifying labels or tags to bales of fibrous material. (*Partly communicated by Henry Ware Goodrich.*)	1385	3rd June 1863	Edward Augustus Locke.
An improved pneumatic hammer, useful also for punching and stamping metals.	1457	11th June 1863	William Walton.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STAMPS, &c.—*continued.*			
Printing machinery - - - - - (*Communicated by Gustave Gilbert Leboyer.*)	1573	22nd June 1863	William Edward Newton.
An improved process for making paper transparent and transferring designs. (*For postage or revenue stamps.*) (*Communicated by Henry Loewenberg and Henry Schoonmaker.*)	1771	15th July 1863	William Clark.
A new method of preventing the forgery of bankers' cheques and other documents, by the use of a stamp and a new apparatus whereby the issue of stamped documents is controlled.	1993	12th Aug. 1863	Rudolph Wappenstein.
Hydraulic apparatus - - - - (*Stampers.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Improvements in machinery for stamping or obliterating and printing, especially applicable to post office purposes, parts of which improvements are applicable to machines in which cams are employed.	2261	15th Sept. 1863	George Howell.
Improvements in printing postage stamps, bankers' bills, shares, and other similar documents, and in machinery employed therein - -	2306	19th Sept. 1863	Louis François Cheza[illegible] and Henry Jeremie Ch[illegible]
Perforating machines - - - - - (*For postage stamps.*)	2496	12th Oct. 1863	John Heap.
Fastening and securing envelopes, letters, dispatches, parcels, packages and other similar articles.	2704	31st Oct. 1863	John Harcourt Brown.
Improved modes of preventing accidents arising from the sale or use of poisons. (*Attaching labels to bottles.*)	2866	16th Nov. 1863	Gilbert Thonger.
An improved method or apparatus for affixing labels on bottles, canisters and other like articles - - - - - -	2869	16th Nov. 1863	Andrew Pollock Henry. and Richard Threlfall Pow[illegible]
Means of and instruments for attaching tags or labels to bales or packets of merchandize. (*Communicated by Porter Fitch.*)	2925	20th Nov. 1863	William Edward Newton.
An improved hand stamp or seal for marking or impressing consecutive numbers or figures.	3065	7th Dec. 1863	Alfred Johnson Aspinall.
An improved stamp for marking post letters and other articles requiring to be stamped or marked in a like manner. (*Partly communicated by Edwin Guthrie.*)	3066	8th Dec. 1863	Malcom Guthrie.
STARCH, SIZE, GLUE.			
A new composition for dressing and preparing silk, cotton and woollen tissues and fibres, and also mixtures of the same. (*Communicated by Jacques Mathevon.*)	873	7th April 1863	Henry Gilbee.
Improved compounds or compositions for sizing, stiffening and coloring yarns and textile fabrics.	893	9th April 1863	David James Cooke.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STARCH, &c.—*continued.*			
An improved combination of materials to be employed for the purposes of sizing and stiffening.	1467	12th June 1863	Joseph Place.
Improvements in decorticating grain and seeds, and in the application of the products obtained by and materials used in decorticating. (*Grain for manufacture of glucose.*) (*Communicated by Jules Lemoine and Louis Joseph Maximilien Chollet.*)	1542	19th June 1863	Michael Henry.
Manufacture of size, glue, and phosphates -	1914	3rd Aug. 1863	Balthazar Wilhelm Gerland.
Apparatus for evaporating and distilling - (*Solutions of gelatine, dextrine or starch.*)	2106	26th Aug. 1863	Jacques Louis Kessler.
Machinery, apparatus or means for drying, cleaning and cooling grain and other vegetable products. (*Starch.*)	2602	22nd Oct. 1863	John Weems.
Ornamenting glass and sheet gelatine - -	2670	28th Oct. 1863	William Nall.
Manufacture of starches by the introduction of coloring matters - - - - -	2839	14th Nov. 1863	James Medway. Samuel Joyce.
Improvements in machinery for amalgamating or intermixing dry, semi-fluid or aqueous materials, and for agitating solids with liquids, for combining, dissolving or washing the same. (*Washing fleshings for glue makers.*)	2947	23rd Nov. 1863	Thomas Carr.
STEAM AND OTHER BOILERS; CLEANSING AND PREVENTING INCRUSTATION OF BOILERS; WATER-FEEDING APPARATUS FOR BOILERS.			
I.—Constructing Steam and other Boilers; Generating and Superheating Steam; Preventing Boiler Explosions.			
Apparatus for burning oils and other inflammable fluids as fuel. (*For generating steam.*) (*Communicated by Augustus Theodore Schmidt.*)	13	2nd Jan. 1863	Frederick Collier Bakewell.
Improvements in generating and condensing steam and evaporating liquids, and in the apparatus employed therein.	38	5th Jan. 1863	Humphrey Chamberlain.
Improvements in the manufacture and treatment of malleable iron and steel, and in furnaces, machinery and apparatus employed in such manufacture. (*Setting boilers.*)	114	13th Jan. 1863	Henry Bessemer.
Manufacture of tubular steam-boilers - -	125	14th Jan. 1863	Thomas Wilkinson.
Apparatus to be used in turkey-red dyeing - (*Boiler.*)	133	15th Jan. 1863	George Graham. John McLeod.
Improvements in boilers for steam-engines and in valves to be used therewith.	205	22nd Jan. 1863	Francis William Morley.
Safety apparatus for steam-boilers - - -	229	26th Jan. 1863	James Fyfe.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STEAM-BOILERS, &c.—*continued.*			
Improvements in the condensation of steam and in apparatus for the same. (*Communicated by Amédée Mathurin Gabriel Sébillot.*)	274	29th Jan. 1863	William Clark.
Improvements in generating combustible gases and in the apparatus employed therefor. (*For heating boilers.*)	307	3rd Feb. 1863	William George Valentin. Frederick Levick.
Obtaining and applying motive-power - - (*Fuel for steam-boilers.*)	356	9th Feb. 1863	John Macintosh.
Traction engines or common road locomotives -	357	9th Feb. 1863	David Law. John Downie.
Regulating the admission of air into the furnaces of steam-boilers.	358	9th Feb. 1863	John Goucher.
Preventing the explosion of steam-boilers - -	437	17th Feb. 1863	Desiré Tassin.
An improvement in boilers for disintegrating and pulping vegetable substances. (*Communicated by William Fittock Ladd and Samuel Armstrong Walsh.*)	467	20th Feb. 1863	William Clark.
Improved means of imparting heat to fluids - (*Raising steam.*)	509	24th Feb. 1863	George Augustus Huddart.
Improvements in machinery for digging, compressing and moulding peat or turf, and for retorts and kilns for drying peat or turf, and making peat or turf charcoal, through the agency of hydrocaloric or superheated steam, and for collecting the products of distillation whilst charring the peat or turf. (*Preparing peat for generating steam.*)	528	25th Feb. 1863	Thomas Vincent Lee.
Improvements in pumping and forcing water and in apparatus for the same. (*Communicated by Barthelemy Louvié.*)	559	27th Feb. 1863	William Clark.
Improvements in steam-boilers and in the arrangement of flues in connexion therewith.	564	28th Feb. 1863	William Hadfield.
Improved arrangements for generating steam in steam-boilers and other vessels, and for heating the liquid contents thereof.	577	2nd March 1863	Owen Murrell.
Steam-boilers and engines - - - -	652	9th March 1863	William Inglis.
Portable hydraulic punching machines - - - (*For punching boiler plates.*)	694	14th March 1863	Joseph Tangye.
Construction of steam-boilers - - -	736	19th March 1863	Henry Wilde.
Construction of steam-boilers - - - - -	816	30th March 1863	Joseph Musgrave.
Improvements in steam-engines and boilers, part of which improvements is applicable to heating purposes.	825	31st March 1863	John Smethurst.
Steam-boilers - - - - - (*Communicated by Edward Dickerson.*)	842	1st April 1863	George Tomlinson Bousfield.
Steam-engines and generators - - -	872	7th April 1863	John Swinburne. John Stanley.
Steam-boilers - - - - - -	882	8th April 1863	George Hill. William Ridings Hill.
Improvements in superheating steam and in apparatus connected therewith.	907	10th April 1863	Thomas Baldwin.
Improvements in furnaces and boilers for the generation of steam, partly applicable also for other purposes.	942	14th April 1863	John Smith.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STEAM-BOILERS, &c.—*continued.*			
Improvements in boilers for heating buildings and in regulators for the same.	948	15th April 1863	Ambrose Marriott.
Improvements in steam-boilers and in regulating the admission of air into the furnaces of steam-boilers.	966	17th April 1863	John Goucher.
A better and more economical mode of securing the bands of locomotive engine and tender springs, also a new method of applying the same - - - - - - -	978	20th April 1863	Philip George Rowell. Henry Holt.
Steam-boilers and apparatus connected therewith -	1006	22nd April 1863	Gill Bridges Barber.
Improved apparatus for fixing drills, which invention is also applicable for fixing apparatus for raising, supporting and suspending weights and for other analogous purposes. (*Boiler plates.*)	1029	25th April 1863	Leopold De Bréanski.
Safety-valves - - - - - - (*Communicated by Johann Andreas Schubert.*)	1038	25th April 1863	Charles Beyer.
Constructing surface condensers and apparatus for heating and cooling fluids.	1052	27th April 1863	Julius Jeffreys.
Generating heat and motive-power - - - (*Super-heating steam.*)	1220	15th May 1863	Benjamin Shillito. David Moor.
Construction of steam-boilers for marine, locomotive and stationary engines - - - -	1243	18th May 1863	Alfred Heather. John Redfern.
Improvements in apparatus for boring, mining and excavating or cutting, in motive-power engines, and in pressure gauges - - -	1322	26th May 1863	James Munro. Robert Scott.
Steam-boilers - - - - - -	1336	28th May 1863	William Irlam Ellis.
Improved apparatus for heating buildings by means of hot water.	1352	29th May 1863	George Henry Pierce.
Steam fire-engines - - - - - (*Communicated by Joseph Garnett Larned.*)	1388	3rd June 1863	Wellington Lee. John Gano Winter.
Improvements in steam-boilers and furnaces for the consumption of smoke.	1394	4th June 1863	Hugh Rigby.
Certain improvements in steam-engines, steam-boilers and steam-heating apparatus.	1399	5th June 1863	Francis Alton Calvert.
Steam-boilers - - - - - -	1442	10th June 1863	William Roberts.
Improvements in obtaining and applying motive-power and in apparatus for the same. (*Communicated by Antoine Merlanchon.*)	1449	11th June 1863	William Clark.
Improvements in steam fire-engines, parts of which improvements are applicable to steam-boilers and to pumps generally.	1474	12th June 1863	Henry Stracey Barron.
Traction engines - - - - -	1482	13th June 1863	Robert Blackburn.
An improved construction of removable head for casks, applicable to the closing of other vessels (*Closing manholes in boilers.*)	1485	13th June 1863	John Solomons Benson. David Jones.
Improvements in the arrangement and construction of steam fire-engines and in steam-boilers for the same, such boilers being applicable to other purposes.	1490	13th June 1863	James Shand.
Valves for the passage of steam, gas and fluids -	1501	16th June 1863	James John Shedlock.
Improved means of and apparatus for boiling in vacuo at a low temperature.	1516	17th June 1863	James Newnam.
Steam-boilers - - - - - -	1582	23rd June 1863	William Louis Winans. Thomas Winans.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STEAM-BOILERS, &c.— *continued.*			
Arrangement of apparatus for superheating steam in steam-boilers	1584	23rd June 1863	William Louis Winans. Thomas Winans.
Apparatus for generating steam	1586	23rd June 1863	Andrew Mein.
Improvements in apparatus for reducing and regulating the pressure or quantity of steam, and in discharging the water of condensed steam from cylinders, pipes and other vessels.	1633	1st July 1863	John Blake.
Furnaces for boilers, smelting and other useful purposes.	1760	14th July 1863	James Davison.
Means of and apparatus for boiling and cooking	1786	16th July 1863	George Rand.
Apparatus for the prevention of boiler explosions	1812	20th July 1863	John Bailey. William Henry Bailey.
Improvements in safety valves and in apparatus connected therewith.	1830	21st July 1863	William Naylor.
Improvements in apparatus for extinguishing chimney fires and in preventing explosions.	1842	23rd July 1863	Louis Laurent Jacques Fillion.
Setting boilers	1874	28th July 1863	John Jewell.
Improvements in shaping boiler and other plates, and in apparatus employed therein.	1904	1st Aug. 1863	George Taylor.
Improved apparatus for generating heat for smelting and other purposes. (*Generation of steam.*)	1946	6th Aug. 1863	John Kirkham.
Certain improvements in steam-boilers	1949	7th Aug. 1863	William Jones.
Improvements relating to baths or boilers used in dyeing.	1986	12th Aug. 1863	George Graham.
Manufacture or production of artificial fuel (*For generation of steam.*)	1991	12th Aug. 1863	James Templeman.
Machinery for punching and for marking plates in which holes are to be punched. (*Boiler plates.*)	2014	14th Aug. 1863	Matthew Hodgson Lishman.
Apparatus for attaching to steam-boilers and flues, for the consumption of smoke.	2042	17th Aug. 1863	Thomas Loftus.
Improvements in steam-boilers and in steam and water gauges for the same	2066	20th Aug. 1863	William Galloway. John Galloway.
Improvements in steam-boilers and in apparatus connected therewith.	2130	28th Aug. 1863	Joseph Walls.
Apparatus for generating steam and for generating gases to be used for heating steam-boilers or for other purposes.	2144	29th Aug. 1863	Louis Emile Constant Martin.
Apparatus for cooking and for obtaining fresh water for use on shipboard and otherwise.	2158	1st Sept. 1863	George Russell.
Steam-boilers	2188	5th Sept. 1863	George Hargreaves.
Improvements in the construction of steam-boilers and in their fire-grates.	2377	28th Sept. 1863	Louis Joseph Joachim Jean.
Improvements in steam-engines and in furnaces and boilers for the same.	2437	5th Oct. 1863	Thomas Ivory.
Steam-boilers and furnaces (*Communicated by Johann Christian Carsten Meyn.*)	2444	6th Oct. 1863	Richard Archibald Brooman.
Vapor bath apparatus (*Generator.*)	2473	9th Oct. 1863	Louis Lefebvre.
Steam-engines and boilers	2532	16th Oct. 1863	Esau Rowing.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STEAM-BOILERS, &c.—*continued.*			
Means of uniting or joining plates or sheets of metal, which invention is applicable to the construction of boilers, tubes and other useful purposes.	2549	17th Oct. 1863	Edward Henry Cradock Monckton.
Boilers and apparatus used for the generation of steam.	2592	22nd Oct. 1863	George Cutler, junior.
Improvements in safety valves for steam-boilers, and in valves and taps for regulating the flow of fluids.	2745	5th Nov. 1863	Sydney Smith.
Improvements applicable to safety valves and pressure or temperature gauges.	2794	10th Nov. 1863	James Mash.
Apparatus for generating steam - -	2822	12th Nov. 1863	Louis Emile Constant Martin.
Preventing the escape of heat from steam-boilers and other heated surfaces.	2846	14th Nov. 1863	Edwin Hargraves.
Engines and boilers specially applicable for agricultural purposes. (*Communicated by John Baptiste Pierret and André Schweizer.*)	2858	14th Nov. 1863	Richard Archibald Brooman.
Certain improvements in steam-boilers or generators.	2890	18th Nov. 1863	John Stewart.
Presses for cutting, perforating and shaping metals (*Boiler plates.*)	2964	25th Nov. 1863	Thomas Wilson.
Machinery for shaping the edges of boiler and other plates - - - -	3001	30th Nov. 1863	John Fernie. George Taylor.
Improvements in heating, parts of the invention being applicable to other purposes - - (*Form of boiler.*)	3055	5th Dec. 1863	Samuel Alfred Varley. Cromwell Fleetwood Varley.
An improved composition for covering steam-boilers and pipes and other surfaces.	3082	8th Dec. 1863	Henry Benson James.
Apparatus for regulating the passage of aëriform and other fluids. (*Steam valves.*) (*Communicated by Charles Joseph Louis Meynard.*)	3096	8th Dec. 1863	Michael Henry.
Apparatus for preventing the explosion of steam-boilers.	3111	10th Dec. 1863	Henry Turner.
Improvements in steam engines and boilers, and in processes or apparatus to be employed in working the same.	3212	19th Dec. 1863	James Howden.
Improvements in the arrangement of furnaces, flues and kilns for drying and burning bricks, tiles and other articles, and in the application of the heat from the kilns to boilers for generating steam.	3266	24th Dec. 1863	James Duckett.
Improvements applicable to steam-boilers for economising fuel.	3274	28th Dec. 1863	Thomas Hall.
Apparatus for heating, boiling, evaporating, and distilling.	3294	29th Dec. 1863	Jean Michel Vanderfeesten.

See also "FURNACES."
See also "GAUGES."

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STEAM-BOILERS, &c.—*continued.*			
II.—Cleansing and Preventing Incrustation in Boilers; Purifying the Water.			
Improved compositions for preventing incrustation and corrosion in steam-boilers and condensers -	106	13th Jan. 1863	Charles Henry Townsend. James Young.
Improvements in the condensation of steam and in apparatus for the same. (*Communicated by Amédée Mathurin Gabriel Sébillot.*)	274	29th Jan. 1863	William Clark.
Steam-boilers and engines - - - -	652	9th March 1863	William Inglis.
Construction of steam-boilers - - - (*Preventing furrowing.*)	736	19th March 1863	Henry Wilde.
Preventing incrustations in steam-engine boilers -	896	9th April 1863	George Spencer.
Preventing incrustation in steam-boilers - -	957	16th April 1863	Charles Ferrett.
An improved method of preventing incrustation of earthy matters in steam-boilers, steam generators and fuel economizers.	1384	3rd June 1863	John Travis.
Steam-boilers - - - - -	1582	23rd June 1863	William Louis Wimans. Thomas Wimans.
An improved mode of preventing and removing the incrustations in marine and land steam-boilers.	1804	18th July 1863	William Charles Page.
Steam-boilers - - - - - (*Preventing incrustation.*)	2188	5th Sept. 1863	George Hargreaves.
Improved apparatus for cleaning out the tubes of steam-boilers, which apparatus is also applicable for cleaning out other tubes.	2500	12th Oct. 1863	Thomas Fox.
An improved apparatus for preventing incrustation in steam-boilers - - - -	2913	20th Nov. 1863	James Seward. Henry Smith.
Preventing the incrustation of steam-boilers and removing incrustation therefrom when formed.	3076	7th Dec. 1863	William Charles Page.
Improvements in steam-engines and boilers, and in processes or apparatus to be employed in working the same.	3212	19th Dec. 1863	James Howden.
Certain improvements in apparatus for removing the sediment and scum from the interior of steam-boilers.	3248	23rd Dec. 1863	John Knowles.
III.—Water-feeding Apparatus for Boilers; Heating Feed-water.			
Improvements in and applicable to that apparatus known as "Giffard's injector," and in the adaptation of it to locomotive and other boilers -	258	28th Jan. 1863	Charles Patrick Stewart. John Robinson.
An improved injector or apparatus for feeding boilers with water - - - -	304	3rd Feb. 1863	Joseph Fletcher. Henry Bower.
Improved arrangements for generating steam in steam-boilers and other vessels, and for heating the liquid contents thereof.	577	2nd March 1863	Owen Murrell.
Machinery or apparatus for collecting the condensed steam or waste water from places where steam is used, and returning the same to the boiler.	645	9th March 1863	Henry Whittles.
Valves - - - - (*For feed pumps.*)	691	14th March 1863	William West.
Certain apparatus for injecting and ejecting fluids - - - - -	744	20th March 1863	Andrew Barclay. Alexander Morton.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STEAM-BOILERS, &c.—*continued.*			
Heating the feed water of steam-boilers	763	23rd March 1863	John William Hughes Rothwell. Edmund James Rothwell.
Improvements in steam-boilers and in regulating the admission of air into the furnaces of steam-boilers. (*Heating the water.*)	966	17th April 1863	John Goucher.
Steam-boilers and apparatus connected therewith (*Feed-water heater.*)	1006	22nd April 1863	Gill Bridges Barber.
Certain improvements in apparatus for heating water in furnaces, flues and chimneys	1019	24th April 1863	John Knowles. Samuel Jackson.
Feed apparatus for steam-boilers (*Communicated by Michel Turck.*)	1098	1st May 1863	William Grindley Craig.
Improvements in obtaining motive-power, which improvements are applicable in part for raising or forcing fluids into steam-boilers, tanks and other vessels.	1160	9th May 1863	William Thomson.
Certain improvements in apparatus for feeding or supplying water to steam-boilers	1383	2nd June 1863	William Gleave. Thomas Young.
Improved apparatus for feeding steam-boilers with water, which apparatus is also applicable for raising water	1488	13th June 1863	Henry Graham. William Wagstaff.
Furnaces for boilers, smelting and other useful purposes.	1790	14th July 1863	James Davison.
Apparatus for supplying steam-boilers with water	1956	7th Aug. 1863	James Platt.
Certain improvements in steam-engines and in the mode of utilising steam. (*For heating feed water, &c.*)	2116	27th Aug. 1863	Francis Pragst.
Improvements in steam-engines and in furnaces and boilers for the same.	2437	5th Oct. 1863	Thomas Ivory.
Certain apparatus for injecting and ejecting fluids (*Feeding water to steam-boilers.*)	2775	7th Nov. 1863	Andrew Barclay. Alexander Morton.
Improvements in the manufacture of salt and in boilers to be fed by salt water. (*Communicated by Charles Louis Edouard Lequin.*)	2875	16th Nov. 1863	Richard Archibald Brooman.
Improvements in steam-engines and in apparatus connected therewith. (*Communicated by Richard Bristol.*)	2927	20th Nov. 1863	John Henry Johnson.
Improvements in fire bars for the boilers of locomotive and other engines, and for fire-boxes and furnaces generally. (*Heating feed water.*)	3165	15th Dec. 1863	William Williams Box.
Steam-engines	3219	21st Dec. 1863	Robert Paterson.
An improved method of feeding locomotive and other boilers, applicable also to the raising of water and other liquids	3220	21st Dec. 1863	Edward Wilson. George Lindsley.
Feeding steam-boilers and condensers (*Communicated by Claude Jonchier.*)	3236	22nd Dec. 1863	Richard Archibald Brooman.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STEAM-ENGINES (*Stationary, Locomotive and Marine.*)			
Obtaining motive-power from steam and the products of combustion.	5	1st Jan. 1863	John Thomas Smith.
Traction engines or common road locomotives -	6	1st Jan. 1863	Robert Faulds.
Certain improvements in steam-engines - -	23	3rd Jan. 1863	Harry Jones.
Construction of traction engines - - -	61	7th Jan. 1863	Thomas Aveling.
Improved means or apparatus for preventing overwinding at collieries and to provide extra breakage power to steam-engines.	71	9th Jan. 1863	John Punshon.
An improved locomotive apparatus - - (*See* "FURNITURE.")	76	9th Jan. 1863	Edmond Alfred Goupil.
Application of power designed for stationary and traction engines, propellers and other machinery. (*Communicated by Perry Dickson and William Ashley Jones.*)	99	12th Jan. 1863	William Edward Newton.
Improvements in obtaining reciprocating motion in steam-engines, and for communicating the same to any ordinary pumps for whatever purpose they may be employed.	166	20th Jan. 1863	Alfred Paul.
An improvement in piston valves and other pistons (*Communicated by Thomas Shrimton Davis.*)	201	22nd Jan. 1863	William Clark.
Steam-engines - - - - - - - - -	206	23rd Jan. 1863	John Milner.
Steam-engines for propelling vessels and for other purposes.	250	28th Jan. 1863	Charles Mace.
Steam-engines - - - - - (*For driving screw propellers.*)	252	28th Jan. 1863	Francis William Wymer.
Rotatory engines - - - - - - -	253	28th Jan. 1863	James Platt.
Improvements in supplying air, gases, steam or fluids to iron and other furnaces, and to engines and vessels requiring such supply, and in the apparatus employed therein.	291	31st Jan. 1863	Edward Brown Wilson.
Obtaining and applying motive-power - -	356	9th Feb. 1863	John Macintosh.
Traction engines or common road locomotives -	357	9th Feb. 1863	David Law. John Downie.
Steam-engines - - - - -	389	13th Feb. 1863	John Frederick Spencer.
Apparatus for regulating and working the valves of steam and other engines.	442	18th Feb. 1863	John Frederick Spencer.
Throttle valves - - - - -	482	21st Feb. 1863	Anthony Dugdale.
Steam-engines - - - -	489	23rd Feb. 1863	Jean Pierre Florimond Datichy.
Improvements in valves and in apparatus connected therewith.	507	24th Feb. 1863	Edward Ross Walker.
Improvements in obtaining and applying motive-power, which improvements or parts thereof are applicable for raising, forcing and measuring fluids.	512	24th Feb. 1863	Robert William Thomson.
Escape or relief valves to the cylinders of marine and other steam-engines.	572	28th Feb. 1863	John Penn.
Supplying water to surface condensers of marine engines.	574	28th Feb. 1863	Edward Hayes.
Steam-engines - - - - -	622	5th March 1863	William Jackson. Richard Watkins.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STEAM-ENGINES.—*continued.*			
Locomotive and stationary engines	635	6th March 1863	Alexander Woodlands Makinson.
Steam-engines (*Communicated by Jules Mouvet.*)	637	6th March 1863	William Edward Gedge.
Steam-boilers and engines	652	9th March 1863	William Inglis.
Locomotive boring and winding engines	668	11th March 1863	Andrew Barclay.
Improvements in traction engines and in apparatus for indicating the pressure of steam.	669	11th March 1863	Andrew Barclay.
Valves (*Foot valves.*)	691	14th March 1863	William West.
Locomotives usually called "traction engines" to be used on common roads.	756	21st March 1863	George Arthur Biddell.
Improvements in steam-engines and boilers, part of which improvements is applicable to heating purposes.	825	31st March 1863	John Smethurst.
Steam-engines and generators	872	7th April 1863	John Swinburne. John Stanley.
Improvements in steam-engines and in the means of applying the same to the tilling of land, also in apparatus to be used with such engines in the tilling of land	880	7th April 1863	James Howard. Edward Tenney Bousfield. John Pinney.
A better and more economical mode of securing the bands of locomotive engine and tender springs, also a new method of applying the same	976	20th April 1863	Philip George Rowell. Henry Holt.
Apparatus for the purpose of using air and steam as a motive-power.	981	20th April 1863	Claude Blanc.
Steam-engines	1018	24th April 1863	John Sheppard.
Constructing surface condensers and apparatus for heating and cooling fluids.	1052	27th April 1863	Julius Jeffreys.
Rotatory engines (*Communicated by Wilhelm Heinrich Christian Voss.*)	1094	30th April 1863	John Henry Johnson.
Locomotive engines and tenders	1135	6th May 1863	Archibald Sturrock.
An improved steam or other motive-power engine	1136	6th May 1863	Charles Wilkins Atkinson.
Marine engines	1146	7th May 1863	Charles Arthur Day. Andrew Lamb. Thomas Summers.
Compound steam-engines (*Communicated by Levi Leigh.*)	1149	8th May 1863	Peter Joel Livsey.
Steam-engines (*Communicated by Francis Bowes Stevens.*)	1159	8th May 1863	George Tomlinson Bousfield.
Improvements in obtaining motive-power, which improvements are applicable in part for raising or forcing fluids into steam-boilers, tanks and other vessels.	1160	9th May 1863	William Thomson.
Rotatory engines (*Communicated by Enrico Fava.*)	1175	9th May 1863	John Henry Johnson.
Generating heat and motive-power (*See* "FURNACES.")	1220	15th May 1863	Benjamin Shillito. David Moor.
Rotary engines (*Communicated by Adrien Jules Alexis Dumoulin.*)	1233	16th May 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STEAM-ENGINES.—*continued.*			
Improvements in motive-power machinery especially adapted for raising and forcing water and other liquids or fluids, parts of said improvements being applicable to steam-engines and other machines fitted with pistons.	1239	16th May 1863	James Whitehead.
Improvements in apparatus for boring, mining and excavating or cutting, in motive-power engines, and in pressure gauges	1322	26th May 1863	James Munro. Robert Scott.
Valves and apparatus for regulating the speed of steam-engines (*Partly communicated by Frederic Perry.*)	1377	2nd June 1863	George Allam Barrett. William Exall. Charles James Andrews. Alfred Barrett.
Certain improvements in steam-engines, steam-boilers and steam-heating apparatus.	1399	5th June 1863	Francis Alton Calvert.
Improvements in slide and other valves and apparatus connected therewith.	1443	10th June 1863	Thomas Adams.
Improvements in obtaining and applying motive-power and in apparatus for the same. (*Communicated by Antoine Merlanchon.*)	1449	11th June 1863	William Clark.
Lubricating apparatus for the cylinders of steam-engines.	1461	11th June 1863	James Johnson.
Reversing levers for locomotive engines and others	1462	11th June 1863	James Johnson. William Braithwaite.
Traction engines	1482	13th June 1863	Robert Blackburn.
Certain improvements in engines for obtaining motive-power from steam or other liquid, also partly applicable to pumps. (*Communicated by John Benjamin Root.*)	1499	15th June 1863	William Clark.
Steam-engines	1510	16th June 1863	William Neill, junior.
Traction engines	1538	19th June 1863	Augustin Morel.
Pistons	1568	22nd June 1863	William Rowan.
Construction or arrangement of the working parts of engines for actuating the propelling shafts of steam vessels	1572	22nd June 1863	William Louis Winans Thomas Winans.
Improvements in lessening the friction of the rubbing surfaces of the slide valves of engines, and of the journals of shafts	1583	23rd June 1863	William Louis Winans. Thomas Winans.
Rotary engines	1621	29th June 1863	Cyrus Avery.
An improved rotative engine	1662	4th July 1863	Michel Emile Eyth.
Steam-engines (*Communicated by Auguste Ghilain and Edouard Poncelet.*)	1666	4th July 1863	Henri Adrien Bonneville.
Turbines (*Steam turbines.*)	1681	7th July 1863	Christian Schiele.
Pistons of steam-engines	1711	9th July 1863	Joseph Francis Delacy. John Charles Raymond Okes.
Improvements in traction engines, and in apparatus for ploughing and tilling land by steam and other power, part of which improvements is also applicable to driving or giving motion to machinery	1726	10th July 1863	Richard Hornsby, junr. John Bonnall. William Astbury.
Metallic pistons	1759	14th July 1863	George Saxon.
Apparatus for condensing steam (*Communicated by Leon Gauchez.*)	1829	21st July 1863	Emile Alcan.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STEAM-ENGINES—*continued.*			
Engines for obtaining motive-power by steam, air or any other vapour.	1868	27th July 1863	James Whittaker.
Operating the cut-off valves of steam-engines -	1900	31st July 1863	Robert Stewart.
Certain improvements in valves for steam-engines -	1922	4th Aug. 1863	Samuel Bury. John Price.
Apparatus for regulating the speed of steam and hydraulic engines.	1938	6th Aug. 1863	Joseph Gustave Pinède.
Obtaining and applying motive-power - - (*Communicated by Pierre Gardere and Charles Patek.*)	2114	26th Aug. 1863	John Henry Johnson.
Certain improvements in steam-engines and in the mode of utilizing steam.	2116	27th Aug. 1863	Francis Pragst.
Assistant bearing springs for locomotive engines, railway carriages, waggons and trucks.	2145	31st Aug. 1863	George Attock.
Improved apparatus for directing motion in right lines. (*Working slide valves.*) (*Communicated by Andrew Buchanan and William Alexander Righter.*)	2201	7th Sept. 1863	Alfred Vincent Newton.
Steam-engines - - - - -	2225	9th Sept. 1863	William Hutchinson.
An improvement in steam-engines - - (*Communicated by Henry Waterman.*)	2226	9th Sept. 1863	Alfred Vincent Newton.
Locomotive or other steam-engines - -	2263	15th Sept. 1863	Andrew Barclay.
An improved construction of rotary engine -	2316	19th Sept. 1863	Hyde Bateman.
Improvements in machinery applicable to steam and water engines (as motors), which machinery is also applicable to lift and force pumps.	2341	23rd Sept. 1863	James Platt.
Rotary engines to be worked by water, steam, air and other motive-power.	2365	25th Sept. 1863	Edward Lloyd.
Rotary engines worked by steam, water or other motive-power - - - - -	2429	5th Oct. 1863	William Hoehl. Christopher Brakell. William Günther.
Motive engines worked by water, steam or other motive-power - - - - - (*Partly communicated by Albert Westfield.*)	2430	5th Oct. 1863	Christopher Brakell. William Hoehl. William Günther.
Propelling - - - - - -	2431	5th Oct. 1863	John Martin Stanley. Jabez Stanley.
Improvements in taps, cocks, hydrants or valves, and apparatus connected therewith, for opening, closing, regulating and facilitating and otherwise controlling the passage or flow of water, air, steam, gas and other fluids and liquids.	2432	5th Oct. 1863	Charles Tomlison.
Improvements in steam-engines and in furnaces and boilers for the same.	2437	5th Oct. 1863	Thomas Ivory.
Locomotive engines - - - - -	2458	7th Oct. 1863	Edward Slaughter.
Apparatus used for hauling agricultural implements	2513	13th Oct. 1863	John Fowler.
Valves for double cylinder steam-engines - -	2516	14th Oct. 1863	Joseph Inchley.
Steam engines and boilers - - -	2532	16th Oct. 1863	Esau Rowing.
Apparatus for ascertaining the weight of the load supported by the springs of railway locomotives and carriages, for the purpose of regulating or equalising such load. (*Communicated by Ludwig Starck.*)	2537	17th Oct. 1863	Morits Meisel.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STEAM-ENGINES.—*continued.*			
Rotary engines - - - - - (*Communicated by George Bradford Mac Farland.*)	2542	17th Oct. 1863	William Clark.
Surface condensers for steam and other vapours - (*Communicated by George Wagstaff Yapp.*)	2566	20th Oct. 1863	William Snell.
Steam-engines - - - - -	2588	21st Oct. 1863	Zerah Colburn.
An improved lubricator for steam-engines - -	2594	22nd Oct. 1863	Henry Wilson.
Improvements in the application of steam combined with air as a motive-power and for other purposes.	2620	23rd Oct. 1863	James Parker.
Improved equilibrium valves for steam-engines and other purposes - - - -	2667	28th Oct. 1863	Richard Needham. James Pollitt.
Improvements in surface condensers, also applicable to the refrigeration or cooling of fluids.	2683	30th Oct. 1863	Henry Cochrane.
Machinery for obtaining motive-power by means of steam. (*Steam wheel.*)	2692	30th Oct. 1863	William Verran.
Machinery for raising and forcing fluids, parts of which improvements are also applicable to steam-engines, blast engines, exhausters and other machines.	2707	31st Oct. 1863	Stephen Holman.
Apparatus for lubricating the cylinders and other parts of steam-engines.	2769	7th Nov. 1863	James Johnson.
Engines and boilers specially applicable for agricultural purposes. (*Communicated by Jean Baptiste Pierret and André Schweizer.*)	2858	14th Nov. 1863	Richard Archibald Brooman.
Rotatory engines - - - - (*Communicated by Enrico Fava.*)	2884	18th Nov. 1863	John Henry Johnson.
Steam-engines - - - - - (*Marine.*)	2898	19th Nov. 1863	John Elder.
Improvements in steam-engines and in apparatus connected therewith. (*Communicated by Richard Bristol.*)	2927	20th Nov. 1863	John Henry Johnson.
Rotatory engines - - - - (*Communicated by Wilhelm Heinrich Christian Voss.*)	2956	24th Nov. 1863	John Henry Johnson.
An invention, firstly, for casting steam cylinders of steam-engines in the form of a segment of a cylindrical ring or circle, and secondly, for the machine for boring them truly cylindrical and retaining the line of the bore on the curve of a true circle. (*Communicated by Samuel Woodruff and Henry B. Beach.*)	3103	9th Dec. 1863	William Henry Cole.
Improvements in engines for hauling agricultural implements and also in traction engines.	3126	11th Dec. 1863	Thomas Webb.
Steam-engines - - - - - (*Communicated by Victor Barbier.*)	3140	12th Dec. 1863	Richard Archibald Brooman.
Improvements in packing pistons, piston rods and other parts of machinery, and in the preparation of material therefor.	3148	12th Dec. 1863	Peter Ward.
Improvements in steam apparatus for raising and forcing water, applicable to steam navigation and water works in general.	3162	15th Dec. 1863	Victor de Staines, B.A.
Railway engines, carriages and permanent way for steep inclines.	3182	16th Dec. 1863	John Barraclough Fell.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STEAM-ENGINES—*continued.*			
Locomotive engines and trains for railways, tramways and common roads.	3195	18th Dec. 1863	William Bridges Adams.
Improvements in steam-engines and boilers, and in processes or apparatus to be employed in working the same.	3212	19th Dec. 1863	James Howden.
Improvements in machinery or apparatus for rolling roads, which is also applicable to traction engines and other similar purposes - -	3216	21st Dec. 1863	William Clark. William Fothergill Batho.
Improved apparatus for lubricating the cylinders of steam-engines.	3218	21st Dec. 1863	Robert Heaton Taylor.
Steam-engines - - - - -	3219	21st Dec. 1863	Robert Paterson.
Improvements in or applicable to locomotive engines - - - - - -	3260	24th Dec. 1863	William Marsden. Francis Henry Stubbs.
Slide valves - - - - - (*Communicated by Louis Amédée Lemaire.*)	3279	28th Dec. 1863	William Clark.
See also "GAUGES." *See also* "GOVERNORS."			
STEERING OR GUIDING SHIPS, CARRIAGES, PLOUGHS, &c.			
Traction engines or common road locomotives - (*Steering or manœuvring.*)	6	1st Jan. 1863	Robert Faulds.
Improvements in screw and paddle propellers and a submarine propeller, also applicable to the raising and forcing of water or other fluids. (*And for steering.*)	98	12th Jan. 1863	Arthur Irwin Mahon.
Improvements in the means of communicating signals on board ship and of indicating the position of the rudder.	210	23rd Jan. 1863	Frederic Newton Gisborne.
Apparatus for steering ships - - -	377	11th Feb. 1863	Edward Humphreys.
Construction of war and merchant ships - -	508	24th Feb. 1863	Hugh Bowlsby Willson.
Improvements in the construction of screw propelled ships, and in the arrangement and mode of disconnecting, withdrawing and lifting screw propellers.	571	28th Feb. 1863	Thomas Edward Symonds.
Apparatus for steering ships - - -	587	3rd March 1863	Thomas Edward Symonds.
Improvements in traction engines and in apparatus for indicating the pressure of steam. (*Guiding.*)	669	11th March 1863	Andrew Barclay.
Construction of ships and vessels for the purpose of obtaining additional strength and motive-power.	707	16th March 1863	John Smethurst.
Improvements in agricultural implements and in apparatus for working the same - -	754	21st March 1863	Frederick Roberts. Alexander Roberts.
Propellers for ships and other vessels - - (*And for steering.*)	831	31st March 1863	Ernest Oswald Coe.
Apparatus for propelling and navigating small craft (*Communicated by Hilaire André Levallois.*)	888	8th April 1863	William Edward Gedge.
Apparatus for steering and manœuvring ships and vessels - - - - - -	1034	25th April 1863	James Dunbar, junior. John Wymen Woodford.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STEERING, &c.—*continued.*			
Means or apparatus to facilitate the steering of ships and other vessels.	1124	5th May 1863	William Glover.
A folding rudder for steering barges in the river Thames or coastwise.	1231	16th May 1863	Robert Talbot.
Apparatus for steering vessels - - -	1340	28th May 1863	Henry Cartwright.
An improved helm for working the rudders of ships or vessels.	1484	13th June 1863	Aimé Méhu.
Improvements in apparatus for working the rudders of vessels, and in auxiliary steering apparatus.	1489	13th June 1863	Samuel Sinclair Robson.
An improved method of propelling and steering ships - - - - - - -	1691	8th July 1863	Edward Myers. Hugh Forbes.
Rudders or apparatus for steering vessels - -	1734	11th July 1863	Morris West Ruthven.
Construction of ships and other floating bodies -	1781	16th July 1863	Joseph Needham Tyzo. William Austin.
An improved apparatus whereby screw propellers may be made to steer as well as propel, applicable also as an improved ball and socket joint.	1955	7th Aug. 1863	Edward Watson.
Improvements in apparatus for tilling land, which improvements are chiefly applicable when steam power is employed.	2128	28th Aug. 1863	John Alison.
An improved rudder and means of working the same.	2210	8th Sept. 1863	William Hewitt.
Modes of propelling and steering vessels - -	2213	9th Sept. 1863	Walter Henry Tucker.
Propelling - - - - - - (*Also steering and reversing.*)	2431	5th Oct. 1863	John Martin Stanley. Jabez Stanley.
An improved mode of and apparatus for steering and turning vessels.	2749	5th Nov. 1863	Frederick Elsworth Sickels.
Propelling and steering ships - - -	2780	9th Nov. 1863	Arthur Auckland. Leopold Pedro Cochrane.
Apparatus for steering ships and vessels - -	2807	11th Nov. 1863	Matthew Stainton. Daniel Lawson.
Rudders - - - - - -	2854	14th Nov. 1863	John Lewis.
Apparatus for steering - - - - -	3013	1st Dec. 1863	Henry Lumley.
Construction of ships of war and other vessels (*Working rudders.*) -	3036	2nd Dec. 1863	Charles Lungley.
Steering gear for ships and other vessels - -	3073	7th Dec. 1863	George Robert Tilling. John Park.
Improvements in the means of communicating signals on board ship, on railways and for other purposes.	3208	19th Dec. 1863	Frederic Newton Gisborne.
Improvements in machinery or apparatus for rolling roads, which is also applicable to traction-engines and other similar purposes - - -	3216	21st Dec. 1863	William Clark. William Fothergill Bailey.
An improved apparatus for steering ships and other floating bodies.	3222	21st Dec. 1863	Frederick Herbert Fitzwilliam.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STONE AND SLATE, ARTIFICIAL STONE, GRINDSTONES AND MILLSTONES.			
Manufacture of artificial stone - - - (*Communicated by Joseph Sepulchre.*)	157	19th Jan. 1863	Ephraim Sabel.
Improvements in apparatus for casting or moulding articles in glass and in imitation of precious stones or marbles.	184	21st Jan. 1863	Adolphe Boubee.
Apparatus for drilling wood, stone, iron or other materials. (*Communicated by Joseph Julien Chenal.*)	370	11th Feb. 1863	Edward Thomas Hughes.
Improvements in dressing millstones, in ornamenting or engraving on glass, pottery and other similar substances, and in materials employed therein. (*Communicated by Cyprien Marie Tessié du Motay and Charles Raphael Maréchal.*)	488	23rd Feb. 1863	Richard Archibald Brooman.
Machinery or apparatus for dressing slates -	772	24th March 1863	Henry Williams.
Improvements in polishing precious and other hard stones, and in the machinery or apparatus employed therein. (*Communicated by Victor Emanuel Tamisier.*)	877	7th April 1863	John Henry Johnson.
Hardening and colouring gypseous limestone and sand and calcareous stones. (*Communicated by Pascal Nicholas Balthazar Fioravanti.*)	940	14th April 1863	Richard Archibald Brooman.
Improvements in apparatus for manufacturing beton and artificial stone, pugging clay and other similar purposes, and in the production of artificial stone, and artistic, ornamental and decorative articles, works and surfaces. (*Communicated by François Coignet.*)	1086	29th April 1863	Michael Henry.
Portable apparatus or instruments for rivetting, caulking, chipping and otherwise operating upon and treating metals and other substances. (*Stone dressing.*)	1095	1st May 1863	John M°Farlane Gray.
Mounting or hanging millstones for grinding grain and other substances.	1122	5th May 1863	Peter Bradshaw.
Improved apparatus for cutting slate - -	1193	12th May 1863	George Augustus Huddart.
Construction of flour and meal mills - -	1393	4th June 1863	Stephen Blake. Thomas Lee. Robert Dutton.
Manufacture of mountings or settings for precious or other stones.	1554	20th June 1863	Alexander Theodore Nicholaus Goll.
Certain compositions for protecting metals and metallic articles from oxidation, and for coating slate, bricks, pottery and ceramic ware. (*Communicated by Camille Baroness de Lavenant.*)	1646	2nd July 1863	Richard Archibald Brooman.
Manufacture of various articles with surfaces in imitation of different kinds of marbles or similar ornamental materials - - - - -	1863	27th July 1863	Frederick Ford. Lewis Ford.
Manufacture of an hydrated silica - - -	2283	17th Sept. 1863	Fédor de Wyldé.
Improved apparatus for boring and cleaving stone -	2531	16th Oct. 1863	James Polglase. Jonathan Cox.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STONE, &c.—*continued.*			
Lamps and stoves for the application of blast heat to horticultural, agricultural and other specified purposes. (*To put a glaze on stone.*)	2535	16th Oct. 1863	Frederick George Stu'e
Improvements in the induration of stone, cement, stucco; brick or other analogous materials, also in the manufacture of artificial stone.	2550	17th Oct. 1863	Fédor de Wyldé.
Machinery for cutting and boring coal, stone or other minerals - - - -	2659	27th Oct. 1863	William Firth. Samuel Firth. John Sturgeon.
Machinery for breaking or crushing stone - -	2705	31st Oct. 1863	William Pope.
Certain improvements in machinery for cutting and boring coal, stone or other minerals -	3066	7th Dec. 1863	William Firth. Samuel Firth. John Sturgeon.
Improvements in grinding pearl, and which said improvements are also applicable for grinding other materials. (*Precious stones, &c.*)	3157	14th Dec. 1863	Samuel Edwards.
For Preserving Stone, *see* "PRESERVING WOOD." For Breaking Stones, *see* "GRINDING MINERALS."			
STRAPS, DRIVING-BANDS AND BELTS.			
Saddlery, harness, driving straps and similar articles	462	20th Feb. 1863	Charles Billingsley.
Manufacture of mill straps and driving bands -	1046	27th April 1863	George Spill. Thomas James Brigs. Daniel Spill.
Apparatus for the transmission of motive-power - (*Metallic belt and pulley.*) (*Communicated by Thomas Luders.*)	1357	30th May 1863	Edward Thomas Hughes.
Improvements in the mode of securing or fastening the ends of metal bands, and in machinery for preparing the same.	1480	13th June 1863	John Hopkinson.
Improvements in the manufacture of mats, floor cloths or coverings for floors, straps, bands, ropes, and other analogous articles which are usually made of textile or fibrous materials. (*Communicated by Placide Peltereau.*)	1831	21st July 1863	William Edward Newto
Improvements in means or apparatus for closing, punching and rivetting hose pipes of leather or other substances, applicable also for punching and rivetting mill bands or driving straps and similar purposes.	1834	22nd July 1863	Charles Senior.
Manufacture of cement - - - - (*For uniting leather belting.*) (*Communicated by Samuel Hilton.*)	2084	15th Aug. 1863	George Tomlinson Bous-field.
Improved solutions to be used in the manufacture of paints, and the preservation of wood, stone and metallic surfaces, and in the preservation and waterproofing of fibrous materials generally. (*Canvas for driving bands.*) (*Communicated by Richard Eaton.*)	2085	20th Aug. 1863	George Spencer.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
STRAPS, &c.—*continued.*			
An improved method of uniting belts and lengths of wire gauze and other metal cloth.	2249	12th Sept. 1863	Ebenezer Noah Gregory.
Joining leather - - - - - - (*For driving bands.*) (*Communicated by Toussaint Landrin.*)	2361	24th Sept. 1863	Henri Adrien Bonneville.
Manufacture of driving straps or bands, and of flexible tubes or hose - - - -	2367	26th Sept. 1863	George Spill. Thomas James Briggs. Daniel Spill.
Manufacture of india-rubber and gutta-percha compounds. (*For coating belting.*) (*Communicated by Lyman Hall.*)	2373	26th Sept. 1863	Lucius Henry Norris.
Driving bands and pulleys for transmitting motion	3098	8th Dec. 1863	Ebenezer Noah Gregory.
SUGAR AND SYRUPS, GLUCOSE.			
Cones or forms for moulding refined sugar - - (*Communicated by Ferdinand Wittmann.*)	279	30th Jan. 1863	William Edward Gedge.
An improved method of applying heat in the manufacture and refining of sugar, and in malting, hop drying, brewing, distilling and vinegar making.	584	2nd March 1863	Charles Garton.
An improved furnace for the revivification of animal charcoal. (*For sugar refining.*)	603	4th March 1863	Jean François Gits.
Improved machinery or apparatus for drying coal, grain and other substances. (*Sugar.*)	857	4th April 1863	Prosper Hanres.
A filtering apparatus for treating by pressure oils, syrups and all sorts of liquids susceptible of filtering. (*Communicated by Edmund Marquis de Ruffo Bonneval and Joseph Mouren.*)	1027	24th April 1863	John Henry Johnson.
An improved machine for breaking loaf sugar -	1060	28th April 1863	John Marris. William Marris.
Improvements in the manufacture of hydrate of barytes and in the manufacture of sugar.	1205	13th May 1863	Karl Ludwig Heusner.
Rotary engines - - - - - - (*Driving turbines in sugar refining.*) (*Communicated by Adrien Jules Alexis Dumoulin.*)	1233	16th May 1863	William Clark.
Machinery for cutting sugar and for assorting the lumps when cut.	1307	25th May 1863	William Muir.
Treating liquorice root to obtain liquid and solid extracts therefrom. (*For syrups.*) (*Communicated by Frumence Nicolas Frezon.*)	1402	5th June 1863	Richard Archibald Brooman.
Improved means of and apparatus for boiling in vacuo at a low temperature.	1516	17th June 1863	James Newnam.
Improvements in decorticating grain and seeds, and in the application of the products obtained by and materials used in decorticating. (*Grain for manufacture of glucose.*) (*Communicated by Jules Lemoine and Louis Joseph Maximilien Chollet.*)	1542	19th June 1863	Michael Henry.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SUGAR, &c.—*continued.*			
An improved mode of evaporating through the combined agencies of heat and centrifugal force, and the machinery employed therein, more particularly applicable to saccharine solutions.	1649	2nd July 1863	William Miller.
An improved mode of and apparatus for treating or preparing megass and other substances to be used as fuel.	1659	3rd July 1863	Hamilton Shirley Ward.
An improved method of and apparatus for treating molasses, syrups, saccharine juices and other products. (*Communicated by Auguste Pierre Dubrunfaut.*)	2053	18th Aug. 1863	Richard Archibald Brooman.
Apparatus for evaporating and distilling - - (*Juice of beet root, sugar cane, &c.*)	2106	26th Aug. 1863	Jacques Louis Kessler.
Hydraulic apparatus - - - - - (*Used in sugar making.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
An improvement in refining sugar - -	2282	17th Sept. 1863	Phineas Cowan.
Certain improvements in centrifugal machines for treating saccharine substances, part of the same being applicable to other centrifugal machines. (*Communicated by Mr. Charles Hänsel.*)	2342	23rd Sept. 1863	Peter Armand le Comte de Fontaine Moreau.
An improved process for recrystallizing sugar -	2400	1st Oct. 1863	William Smith.
Collecting and saving the spirit or alcohol generated by spontaneous fermentation in raw sugar, concrete melado and molasses, and thrown off during the process of boiling or refining.	2405	1st Oct. 1863	Francis Reid.
Improvements in restoring the crystals of lump or refined sugar which has been divided by saws, and in apparatus employed for this purpose.	2421	2nd Oct. 1863	George Shepherd. William Thomas Shepherd.
Separation of molasses and other impurities from sugar crystals. (*Communicated by Professor Dr. Henry Schwarz.*)	2551	17th Oct. 1863	Fédor de Wyldé.
Improvements in evaporating, cooling and melting, and in apparatus employed therein - - (*Melting sugar.*)	2575	20th Oct. 1863	Charles Garton. Thomas Hill.
Improvements in saturating, washing and cleansing charcoal and other matters, applicable also to the separation of syrups from sugar.	2855	14th Nov. 1863	Lauchlan Mackirdy.
Improvements relating to the manufacture or refining of sugar.	3010	1st Dec. 1863	George John Doddrell.
Centrifugal machines for extracting the syrups from sugar.	3123	11th Dec. 1863	John Corby.
Apparatus for heating, boiling, evaporating and distilling.	3294	29th Dec. 1863	Jean Michel Vanderfeeten.
SULPHUR.			
Improvements in purifying and treating coal gas, sulphuretted hydrogen, and other gases containing sulphuretted hydrogen, and in obtaining sulphur, sulphuric and other acids in such treatment - - - - - - -	956	16th April 1863	Isham Baggs. William Simpson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SULPHUR.—*continued.*			
New employment of magnesia and its combinations in manufactures.	1776	15th July 1863	Doctor Christian Gustav Clemm.
Obtaining sulphur and sulphurous acid from 'alkali waste.'	2203	8th Sept. 1863	Ludwig Mond.
Separating sulphur from alkali waste - -	3009	1st Dec. 1863	Benjamin Jones.
SURGERY, SURGICAL INSTRUMENTS, TRUSSES FOR HERNIA; INVALID FURNITURE; FACILITATING HEARING.			
Manufacture of elastic fabrics - - - (*Surgical bandages.*)	4	1st Jan. 1863	Matthias Edward Bowra. Arthur Edward Francis.
Apparatus applied to perambulators, invalid chairs and other carriages.	100	13th Jan. 1863	Thomas George Lewis.
A new kind of covering for the ears, made of india-rubber, gutta-percha or other materials.	316	4th Feb. 1863	Louis Joseph Henry Marville.
Tongs or forceps for grasping articles out of reach of the hand - - - - - (*For surgical purposes.*)	403	14th Feb. 1863	William Baylis. Thomas Henry Hopwood.
Improvements in embalming and preserving from decay human bodies and bodies of other animals, also pickling, curing and flavouring animal bodies. (*For dissecting rooms.*)	412	14th Feb. 1863	John Morgan, F.R.C.S.I.
The better and more commodious manufacture of all kinds of easy lounging and invalid chairs, seats or settles.	636	6th March 1863	Alfred Wilson.
Apparatus for generating carbonic acid - - (*For cure of paralysis, gout, &c.*)	732	18th March 1863	Auguste Morel.
Probes, catheters and similar surgical instruments - (*Communicated by Bernard Saurel.*)	868	6th April 1863	Michael Henry.
Improvements in apparatus for withdrawing milk from cows and other mammiferæ, and for conducting it when withdrawn to appropriate receivers - - - - (*Partly communicated by Thomas Barland.*)	1082	29th April 1863	Margaret Barland. Edward Henry Cradock Monckton.
Carriages for common roads - - - (*Or for invalids.*)	1240	18th May 1863	Eleazar Christmas.
Manufacture of trusses - - - - -	1258	19th May 1863	Thomas Partridge Salt.
Construction of carriages - - - - (*Bath chairs.*) (*Communicated by Charles William Hine Sargent.*)	1309	25th May 1863	Henri Adrien Bonneville.
A new compound extract to be employed as a means for the cure of deafness.	1464	12th June 1863	William Sims.
An improved apparatus for the prevention, cure and relief of hernia of every description, together with prolapsus uteri, uterine hemorrhage, hernia humoralis, and as a general support for enlargement of the abdomen from whatever cause proceeding.	2045	18th Aug. 1863	Joseph Arthur, M.D.
Apparatus for the treatment of certain bodily ailments.	2073	20th Aug. 1863	Charles Daniel Hammond, M.D.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
SWEEPING ROADS.			
An improved implement or apparatus for scraping and sweeping turnpike and other highways, carriage drives and foot walks, or other places requiring to be so cleaned.	1473	12th June 1863	Robert Hughes.
Road sweeping machines - - - - (*Communicated by Jean Baptiste Tailfer.*)	1982	11th Aug. 1863	William Clark.
Improvements in cleaning roadways and in the machinery or apparatus employed therein. (*Communicated by Thomas Agudio.*)	3188	17th Dec. 1863	John Henry Johnson.
TAR AND RESIN.			
Distillation of coal tar, tar oil, resin, resin oils, all hydro-carbons, petroleum, or other mineral or vegetable oils and spirits derived therefrom.	1295	23rd May 1863	William Cormack.
Distillation of bituminous substances - - (*Communicated by John Saunders.*)	1433	9th June 1863	Richard Archibald Brooman.
The manufacture of a new product from peat and peat tar. (*See* "CHARCOAL.") (*Communicated by Edmund Hess.*)	1784	16th July 1863	Louis Rudolph Bodmer.
Improvements of stills or retorts for the distillation of petroleum or tars from coal or shale or the products thereof.	2899	19th Nov. 1863	Anthony Gapper Southby.
TELEGRAPHS (*Electric*); TELEGRAPHIC PRINTING APPARATUS.			
Magneto-electric telegraphs - - - (*Communicated by George Washington Beardslee.*)	41	6th Jan. 1863	William Edward Newton.
Certain improvements in telegraphic cables - -	104	13th Jan. 1863	William Platts. John Bailey.
Manufacture of insulators for electric telegraphs -	160	19th Jan. 1863	Sir William O'Shaughnessy Brooke.
Improvements in covering wire and other iron articles for the purpose of protecting them from oxidation, and in the mode or method employed therein.	163	19th Jan. 1863	William Henry Harrison.
Means or apparatus for effecting telegraphic communications.	241	27th Jan. 1863	David Edward Hughes.
Insulating and supporting telegraph line wires -	464	20th Feb. 1863	Charles William Siemens.
Improvements in insulating and protecting telegraphic and other wires and rods, and in machinery connected therewith.	505	24th Feb. 1863	William Hooper.
Electro-magnetic telegraphs - - -	516	25th Feb. 1863	Henry Wilde.
A new or improved means or apparatus for communicating signals or intelligence to or from railway trains or other similar conveyances, whether they be stationary or in motion.	704	16th March 1863	William Vernon.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
TELEGRAPHS, &c.—*continued.*			
Arrangement and construction of apparatus for transmitting electric currents and signals for telegraphic purposes. (*Partly communicated by Gaetano Bonelli.*)	768	24th March 1863	Henry Cook.
Electric telegraph printing apparatus - - (*Communicated by Theodore Auguste Marie Sortais.*)	830	31st March 1863	Richard Archibald Brooman.
Improvements in treating and preparing iron, copper and other wires for telegraphic and other uses, for the purpose of preserving them from corrosion or decay.	963	17th April 1863	Richard Knight.
Improved apparatus for laying down, protecting and controlling submarine cables for telegraphing from vessels moored off a coast to the shore.	1069	28th April 1863	Thomas Moore.
Laying submarine telegraph cables - - (*Communicated by Adolphe Pelegrin and Auguste Garbeiron.*)	1199	13th May 1863	Richard Archibald Brooman.
Electro-magnetic telegraphs - - -	1200	13th May 1863	Henry Wilde.
A new material or compound applicable to the manufacture of pipes or tubes, to caulking or covering ships' bottoms, and to other useful purposes. (*For telegraphic wires.*)	1550	20th June 1863	Charles Peterson.
Apparatus for insulating electric-telegraph wires -	1620	29th June 1863	William Andrews.
An improved waterproof material - - (*For telegraphic cables.*) (*Communicated by Jules Wiese.*)	1635	1st July 1863	William Snell.
Improvements in the manufacture of telegraphic wires and in the apparatus connected therewith. (*Communicated by Gustave Eugène Michel Gerard.*)	1668	4th July 1863	Henri Adrien Bonneville.
Electric telegraphs - - - -	1772	15th July 1863	Pierre Antoine Joseph Dujardin.
Apparatus for telegraphing by electricity - - (*Communicated by Woldemar Stroubinsky.*)	1775	15th July 1863	Richard Archibald Brooman.
Improvements in the manufacture of pillars, posts, columns, mouldings and buildings when corrugated metal is employed, and in machinery used in corrugating, moulding and shaping metal for such purposes. (*Telegraph posts.*)	1792	16th July 1863	Edwin Maw.
Laying and supporting submarine telegraph cables	2190	5th Sept. 1863	William Norton.
Improvements in the manufacture and construction of fences, part of which are also applicable to the manufacture and construction of gate posts, and to poles and posts used for telegraph and signal purposes, and for stretching telegraph wires.	2192	5th Sept. 1863	Joseph Rowell.
Electric telegraph apparatus - - -	2262	15th Sept. 1863	Warren Thompson.
Improvements in railway telegraphs and signals, and also in the permanent way and carriages for preventing railway accidents.	2332	21st Sept. 1863	William Adolf von Kanig.
Improvements in the mode of manufacturing submarine telegraph cables, in apparatus connected therewith, and in the method or principle of laying same, and in the preparation of the several compounds described for electric insulation and other purposes.	2386	29th Sept. 1863	Frederick George Mulholland.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
TELEGRAPHS, &c.—*continued.*			
Improvements in the manufacture of woven fabrics applicable to covering telegraph wires.	2387	29th Sept. 1863	Sam Mendel.
Improved method of conveying electric signals and telegrams without the intervention of any continuous artificial conductor.	2682	30th Oct. 1863	John Haworth.
Testing the strength of wire for telegraphic and other purposes.	2763	6th Nov. 1863	Richard Johnson.
Apparatus for submerging submarine telegraph cables. (*Partly communicated by Werner Siemens.*)	2826	13th Nov. 1863	Charles William Siemens
Improvements in the manufacture of tubes, rings and cords of india-rubber, and in covering telegraph wires - - - - -	2893	18th Nov. 1863	Josiah George Jennings, Manuel Leopold Jones Lavater.
Improvements in the construction and working of electric telegraphs and in apparatus connected therewith, partly applicable to other purposes.	3006	1st Dec. 1863	Henry Wilde.
Compounds or compositions for coating or covering iron or wooden ships and vessels, metallic sheathing, telegraph cables and other objects, to preserve them from decay, fouling or other destructive action - - - - -	3012	1st Dec. 1863	Jesse Gustavus Redman, George Martin.
A new and improved mode or process of covering or insulating wire for telegraphic and other uses or purposes, with twine, cordage and other covering of a like character - - - -	3151	14th Dec. 1863	John Aylesworth Bailey, John James Speed.
Telegraphic cables - - - - -	3252	23rd Dec. 1863	Frederick Walton.
TESTING APPARATUS; DYNAMOMETERS.			
Construction of air tight boxes, cases, cupboards and similar vessels.	276	29th Jan. 1863	Frederick George Stone
Improvements in spinning, doubling, throwing and reeling silk, and in the machinery employed therein - - - - - - - (*Testing the size.*)	549	27th Feb. 1863	John Houghton Allen, Henry Hooton Cocker
Hydraulic apparatus - - - - - (*For testing concrete, rails, springs, &c.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
An improved salinometer which is applicable also as a hydro-meter and for other similar or analogous purposes. (*Dynamometers.*)	2655	27th Oct. 1863	Patrick Benignus O'Neil
Testing the strength of wire for telegraphic and other purposes.	2763	6th Nov. 1863	Richard Johnson.
Improvements in testing and measuring the strength and other properties of various materials and structures, and in apparatus therefor.	2970	26th Nov. 1863	David Kirkaldy.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
THERMOMETERS, BAROMETERS, PYROMETERS, SALINOMETERS.			
Improvements in ordnance and artillery, and means of operating and mounting the same, and in projectiles and instruments therefor. (*Determining heat.*)	484	21st Feb. 1863	Norman Wiard.
Apparatus for indicating any regulated maximum or minimum degree of temperature. (*Communicated by Alexander Ross.*)	670	11th March 1863	John Werge.
Barometers	813	28th March 1863	William Symons.
An improved construction of barometer	889	8th April 1863	William Haslett Mitchel.
Improved apparatus for ascertaining the temperature of steam and its power of tension. (*Communicated by Hans Ambroseus.*)	998	22nd April 1863	Frederick Edward Bryant.
Construction of pyrometers	1084	29th April 1863	George Holcroft.
Salinometers	1174	9th May 1863	James Burrell.
Improvements in obtaining and applying motive-power and in apparatus for the same. (*Communicated by Antoine Merlanchon.*)	1449	11th June 1863	William Clark.
Barometers or gauges for measuring the pressure of fluids. (*Communicated by Felix Richard.*)	1715	9th July 1863	William Edward Newton.
Machinery for rolling hoops and tyres (*Constructing thermometers.*)	1832	22nd July 1863	Peter Rothwell Jackson.
A new division of time and the application thereof to mathematical and other instruments. (*Applicable to thermometers, barometers, &c.*)	2107	26th Aug. 1863	Santini Fattorini.
Barometers, gas regulators, and other apparatuses for regulating and indicating the flow and pressure of liquids and fluids	2383	28th Sept. 1863	John Bailey. George William Blake. William Henry Bailey.
An improved salinometer which is applicable also as a hydro-meter and for other similar or analogous purposes.	2655	27th Oct. 1863	Patrick Benignus O'Neill.
Improvements applicable to safety valves and pressure or temperature gauges.	2794	10th Nov. 1863	James Mash.
THRASHING, WINNOWING, HULLING, DRESSING, CLEANING, DRYING, STORING AND PRESERVING CORN, GRAIN, SEEDS AND RICE; GRANARIES.			
An improved apparatus for cleansing wheat or other grain or seeds.	135	15th Jan. 1863	Louis Pierre Josse.
Improvements in desiccating and in preserving matters from decay. (*Corn, &c.*) (*Communicated by Jean Baptiste Pierre Camille Bergouknioux.*)	186	21st Jan. 1863	William Clark.
Rotatory screens suitable for screening wheat and other grain or seed	191	21st Jan. 1863	Nathaniel Clayton. Joseph Shuttleworth.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
THRASHING, &c.—*continued.*			
Construction of granaries - - - - (*Communicated by Louis Jean Gustave de Coninck.*)	262	29th Jan. 1863	Henri Adrien Bonneville
Thrashing-machines - - - -	270	29th Jan. 1863	Nathaniel Clayton. Joseph Shuttleworth.
Improvements in rotary screens and in the machinery or apparatus employed in the manufacture of such screens.	424	16th Feb. 1863	William Nalder.
Apparatus for separating potatoes into different sizes.	480	21st Feb. 1863	Herbert Mackinder.
Machinery for dressing grain - - -	504	24th Feb. 1863	Josiah Le Butt.
Manufacture of beaters for thrashing-machines -	558	27th Feb. 1863	William Gray.
An improved method of supporting screens and straw shakers, specially applicable to threshing-machines.	620	5th March 1863	Edward Pellew Pleyy. William Pain.
Machinery or apparatus for washing or cleansing and drying Egyptian wheat, beans and other kinds of grain or seeds.	699	14th March 1863	James Walworth.
Cleansing and treating certain descriptions of wheat and other grain.	727	18th March 1863	Benjamin Wren.
A new or improved machine for thrashing out the seed of flax.	728	18th March 1863	Ernest Legris.
Machinery for drying and cooling grain and seeds - (*Communicated by Jesse Brown Wheeler and Simeon Losee.*)	737	19th March 1863	Henry Osburne Harris
Machinery or apparatus for cleaning and decorticating grain. (*Rice.*)	822	30th March 1863	Wilson Ager.
Improved machinery or apparatus for drying coal, grain and other substances. (*Rice, &c.*)	857	4th April 1863	Prosper Haurez.
Machinery or apparatus for drying grain, applicable also to the manufacture of malt. (*Communicated by George Henry Fourdrinier.*)	876	7th April 1863	John Henry Johnson.
An improved method and apparatus for loading carts and waggons with hay, straw and other similar products.	923	11th April 1863	Charles Atkins Collins
Improvements in smut machines and in machines for cleansing and peeling grain and seeds.	962	16th April 1863	François Antoine Eloi Guironnet de Massas
Improvements in apparatus for separating corn from the ears, and for combing straw.	971	17th April 1863	Bernard James Webber
Improvements in apparatus for hulling grain and for reducing granular substances.	976	18th April 1863	Gustav Adolph Buck
Improvements in threshing-machines, part of which improvements are also applicable for hulling, decorticating, cleaning and polishing grains and seeds. (*Communicated by Aristide Barbier and Nicholas Edouard Daubrée.*)	1042	25th April 1863	William Edward Newton
Improvements in machines for threshing out corn from its straw, part of which is applicable for combing the straw.	1058	27th April 1863	Henry Beard
Improvements in drying and cooling grain and in the machinery or apparatus employed therein. (*Communicated by William Henry Sutton and James John Gibson.*)	1066	28th April 1863	John Henry Johnson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
THRASHING, &c.—*continued.*			
Improvements in machinery or apparatus for grinding, crushing, cleaning and hulling or shelling various kinds of farm or vegetable produce, also applicable to the crushing or grinding of minerals and other substances.	1226	15th May 1863	John Patterson.
An improved apparatus for conveying goods either in bulk or otherwise, whether to or from the warehouse or vessel, having an inclined, vertical or horizontal movement, to be worked either by pressure of air or by vacuum and atmospheric pressure.	1366	1st June 1863	Frederick Warwick Smith.
Means for drying grain - - - -	1367	1st June 1863	Lewis Scudder Chichester.
An improved machine for unhusking rice and other seeds.	1469	12th June 1863	John Charles Wilson.
Thrashing-machines - - - - (*Communicated by William Roberts.*)	1472	12th June 1863	Thomas Hughes Milner.
Apparatus for removing the bran or outer skin from wheat and other grain - - - - -	1508	16th June 1863	Joseph Steele. William Mason.
A combined machine for collecting and placing in rows, or collecting and elevating into a waggon or elsewhere, hay, corn or other agricultural produce.	1514	17th June 1863	John Banwell.
Improvements in metal screens and sieves for screening and sifting, applicable also to other openwork articles. (*Corn sifting.*)	1540	19th June 1863	William Hicklin.
Improvements in decorticating grain and seeds, and in the application of the products obtained by and materials used in decorticating. (*Communicated by Jules Lemoine and Louis Joseph Maximilien Chollet.*)	1542	19th June 1863	Michael Henry.
Machinery applicable to thrashing-machines and for cutting and bruising straw.	1607	25th June 1863	John Head. Henry Brinsmead.
Machinery for decorticating and cleaning corn and other grain. (*Communicated by Louis Basilide Sulpice Poissant.*)	1655	3rd July 1863	Robert Davison.
Arrangement and construction of fixed and portable combined thrashing-machines - -	1671	4th July 1863	George Allam Barrett. William Exall. Charles James Andrewes. Alfred Barrett. John Leakey Bowhay.
Thrashing-machines - - - -	1718	9th July 1863	William Tasker the younger.
Thrashing and dressing machines - - -	1758	14th July 1863	James Holmes. George Thomas Holmes. Frederick Robert Holmes.
Improvements in ventilating hay, corn and other ricks, and in apparatus connected therewith.	1873	28th July 1863	Douglas Taylor.
Apparatus for elevating straw and other agricultural produce - - - - - - -	1910	1st Aug. 1863	Thomas Fellowes. Henry Hemfrey.
Machinery for scouring, cleaning and polishing wheat, rice, malt, grain and other seeds.	1997	13th Aug. 1863	John Ellis.
An improved method of fire-proof construction for buildings, by the use of arches formed of concrete. (*Malt rooms.*)	1998	13th Aug. 1863	Charles Colton Dennett.
Shakers for thrashing-machines - - -	2027	15th Aug. 1863	Frederick Flavell.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
THRASHING, &c.—*continued.*			
Improved machinery for thrashing corn and other grain or seeds.	2033	15th Aug. 1863	Edward Hammond Betall.
Separating and elevating apparatus for grain or granular matters.	2167	2nd Sept. 1863	Robert Young.
Improved apparatus for cleaning and decorticating grain and seeds. (*Communicated by Adolphe Rousseau.*)	2181	3rd Sept. 1863	Alfred Vincent Newton.
Drying or curing certain vegetable productions - (*Cereal crops.*)	2259	14th Sept. 1863	William Gossage.
Threshing-machines - - - -	2272	16th Sept. 1863	Bernard James Webber
Apparatus for loading and unloading vessels, and raising, lowering and otherwise conveying sacks, casks, agricultural produce and other objects, from one locality to another.	2326	21st Sept. 1863	Richard Wallis.
Improved apparatus for cleaning rice and other grain. (*Communicated by Amasa Howe.*)	2407	1st Oct. 1863	William Edward Newton
Machinery for separating different sizes of root - (*Potatoes.*)	2471	8th Oct. 1863	John Spencer.
Improvements in smut machines and in machines for cleansing and peeling grain and seeds.	2534	16th Oct. 1863	François Antoine Edmond Guironnet de Massa.
Machinery, apparatus or means for drying, cleaning and cooling grain and other vegetable products.	2602	22nd Oct. 1863	John Weems.
Thrashing-machines - - - -	2706	31st Oct. 1863	John Wilson.
Thrashing-machines - - - -	2733	4th Nov. 1863	William Audinwood.
Mills for cleaning cotton seed - - -	2857	14th Nov. 1863	James Harrison.
Apparatus for thrashing and reeding wheat and other straw.	2921	20th Nov. 1863	Thomas Brinsmead.
Improvements in preserving grain, flour and other similar substances, and in the apparatus connected therewith. (*Communicated by Alphonse Louvel, M.D.*)	2926	20th Nov. 1863	Henri Adrien Bonneville
Machinery for thrashing and screening wheat and other grain.	3052	4th Dec. 1863	Richard Hornsby, junior
Raising or removing grain from one place to another.	3101	9th Dec. 1863	Henry Audinwood.
Machinery for unhusking rice and other seeds -	3138	12th Dec. 1863	John Charles Wilson.
Improvements in cleansing or dusting rice and other grain, and in the machinery or apparatus employed for that purpose.	3161	15th Dec. 1863	Henry Beaufort Sears.
THREADS AND YARNS.			
Apparatus for polishing yarn, twine, threads and other similar materials - - -	324	5th Feb. 1863	Joseph Gill. James Parkin.
Machinery or apparatus for doubling or twisting yarn, thread, braid, rope or similar articles. (*Communicated by Jean Marie Daillon.*)	552	27th Feb. 1863	Edward Thomas Hughes
Working presses for making up yarn in bundles -	649	9th March 1863	James Isherwood.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
THREADS, &c.—*continued.*			
Means or apparatus for the production of printed or particolored yarns. (*See* "PRINTING.")	1885	30th July 1863	Julius Boeddinghaus.
Machinery for the manufacture of yarns, threads, laid twine and other cordage - - -	1886	30th July 1863	Joseph Thompson Stephens. Charles Hoare.
An improved mode and apparatus for dressing, finishing and imparting lustre to yarn and thread made of silk, cotton and other fibrous substances. (*Communicated by Emanuel Bürgy and Louis Guillemin.*)	1989	12th Aug. 1863	Louis Rudolph Bodmer.
An improved machine for glossing and glazing all kinds of threads. (*Communicated by Alfred Julien Thiriez, Edouard Julien Thiriez and Victor Charles Julien Thiriez.*)	2180	3rd Sept. 1863	Henri Adrien Bonneville.
An improved thread for fishing nets - - (*Communicated by David Alexandre Aguitton.*)	2298	18th Sept. 1863	Richard Archibald Brooman.
Adapting or arranging tapes and other such narrow fabrics and threads for use.	2940	21st Nov. 1863	Marcus Brown Westhead.
The production of thread, cordage and woven textile fabrics from prepared fibre of hemp or any of the plants known of the order or genus "Cannabis," and in mixing such prepared fibre with cotton, silk or animal wool - -	2950	24th Nov. 1863	St. George Gregg. Thomas Gray.
Manufacture of paper, thread, cordage and fabrics from beetroot.	2967	25th Nov. 1863	Louis Accarain.
Machinery or apparatus for cutting strips or threads of india-rubber or other materials.	2985	27th Nov. 1863	James Clark.
A holder or suspender for holding cotton and other reels, spools or balls, parts of which are also applicable for other useful purposes.	3224	21st Dec. 1863	Edwin John Green. Richard Mason.
TOBACCO AND SNUFF; CIGARS, CIGAR-HOLDERS, PIPE AND CIGAR LIGHTERS; SMOKING PIPES; TOBACCO POUCHES.			
Manufacture of elastic fabrics - - - (*Springs for tobacco pouches.*)	4	1st Jan. 1863	Matthias Edward Bowra. Arthur Edward Francis.
Pipes for smoking tobacco or other herbaceous compounds.	12	2nd Jan. 1863	William Alfred Distin.
Improvements in the finish and mode of packing cigars, and in apparatus used for these purposes.	15	2nd Jan. 1863	Henry Lyon.
Improvements in lucifer matches, fusees, and other similar lights, and in the boxes or holders for containing the same. (*Communicated by Thomas Jordery.*)	56	7th Jan. 1863	William Squire Bruce.
Improvements in desiccating and in preserving matters from decay. (*Tobacco.*) (*Communicated by Jean Baptiste Pierre Camille Bergouknioux.*)	186	21st Jan. 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
TOBACCO, &c.—*continued.*			
Pipes for smoking tobacco - - -	208	23rd Jan. 1863	Edward Strangman.
Improvements connected with cigars and other tobacco smoking appliances.	290	31st Jan. 1863	William Alexander Lyttle.
Portable "hooka" pipes - - - -	775	24th March 1863	Arthur John Cooke.
A new or improved wrapper or wrapping material for use in smoking tobacco.	1520	17th June 1863	Edward Wolf.
Machinery for cutting tobacco into cakes suitable for the press - - - - -	1640	1st July 1863	John Harvey. James Samuel Harvey.
Treatment of cut tobacco for its better preservation	1680	6th July 1863	George Clayton Collyer.
Improvements in lucifer matches, fusees and other similar lights, and in the boxes or holders for containing the same. (*Cigar or pipe lights.*) (*Communicated by Thomas Jordery.*)	1683	7th July 1863	William Squire Bruce.
Fastenings for cigar cases, portemonnaies, bags and other like articles.	1909	1st Aug. 1863	Edmund Sutton.
Manufacture of fusees or matches employed to light cigars and pipes.	2089	22nd Aug. 1863	Henry Joseph Simlick.
A new or improved apparatus for lighting and cutting the ends of cigars.	2119	27th Aug. 1863	Charles Richard.
Machinery or apparatus for crushing and flattening the stalks of tobacco and other substances.	2134	29th Aug. 1863	Thomas Williams.
Improvements in cigar lighters and fusee matches, part of said improvements being applicable also to vestas and matches, wax tapers and candles.	2260	15th Sept. 1863	Charles Battcock.
An improved cigar holder - - - - (*Communicated by Arthur Attree.*)	2396	30th Sept. 1863	Eliza Selene Attree.
An improved mode or method of filling tobacco pipes of an improved construction - -	2424	3rd Oct. 1863	George Robert Tilling. John Park.
Smoking pipes - - - - -	2622	23rd Oct. 1863	Alfred Wardle. Joseph Brindley.
An improved preparation of tobacco for fumigating purposes.	2662	28th Oct. 1863	Abraham Senior Coronel.
Manufacture of fusees or matches employed to light cigars and pipes.	2811	12th Nov. 1863	Henry Joseph Simlick.
Certain improvements in cigars - - -	2831	13th Nov. 1863	Harry Farncombe Hedson.
An improved pipe stick - - -	2916	20th Nov. 1863	Ernst Pezold.
Improvements in the manufacture of fusees, vesuvians or other cigar or pipe lights, and in means or apparatus employed in the manufacture of cigar or pipe lights, lucifer matches and vestas.	3060	8th Dec. 1863	George Charles Grimes.
Improvements in the manufacture of purses, bags and other similar articles, and in fastenings for the same. (*Pouches, cigar cases, &c.*) (*Communicated by Ignatz Lindenblith.*)	3280	28th Dec. 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
TOYS.			
Automatic walking dolls and other figures (*Communicated by John Bently Munn.*)	40	6th Jan. 1863	Joseph Alvin Munn. Jonathan Darwin Cobb.
An improved toy (*Communicated by Paul Bonfils.*)	1129	6th May 1863	William Edward Gedge.
Construction of kites (*Communicated by Joseph Louis Horsin.*)	1419	8th June 1863	William Edward Gedge.
Improvements in the construction of rocking horses and in giving additional motion thereto. (*Communicated by William Hignett.*)	1493	15th June 1863	Thomas Cope.
Toy pistols	1525	18th June 1863	Jules Louis Ganne.
Application of steam to toy boats or other similar toys where steam can be employed as a motive-power.	1896	31st July 1863	Jean Baptiste Andreux.
Certain improvements in machinery or apparatus for giving motion to "hobby horses," "flying and swinging boats" or similar apparatus used for public amusement.	1907	1st Aug. 1863	Thomas Bradshaw.
Swings	2267	16th Sept. 1863	John Cox.
Shooting toy fusees, toy rockets or other similar toy missiles, by means of toy pistols or other toy fire-arms	2466	8th Oct. 1863	Germain Canouil. François Armand Blanchon.
A new toy being a mechanical wooden horse	3163	15th Dec. 1863	Victor Obert.
Improved toys	3300	30th Dec. 1863	Auguste Charles Joseph Lengelée. Francois Phillipe Morel. Desiré George Mathieu Coquet.
TRAYS, SALVERS, DISHES, PLATES, DISH-COVERS, CRUET FRAMES, SALT CELLARS.			
Ovens, hot plates and cooking apparatus	94	12th Jan. 1863	Ebenezer Stevens.
Certain improvements in the construction and manufacture of breakfast, cruet and liquor frames used in dinner and other services.	215	24th Jan. 1863	Arthur Osborne Glossop.
Dish covers	892	9th April 1863	Howard Busby Fox.
Moulding articles of china or other clay or of other plastic materials. (*Dishes, plates, saucers, &c.*)	1000	22nd April 1863	François Durand.
Improvements in the ornamentation of silver, German silver, Britannia metal, electro-plated or other plated goods. (*Salt cellars, cruets, salvers, &c.*)	1595	24th June 1863	Thomas Skinner.
Machinery or apparatus for moulding or shaping pottery-ware. (*Elliptical dishes.*) (*Communicated by Robert Marcher.*)	1627	30th June 1863	John Henry Johnson.
Manufacture of lids or covers for certain articles of hollow ware.	2195	5th Sept. 1863	Charles Henry Adames.
Apparatus for drying plates and other articles of china and earthenware. (*Saucers and dishes.*)	2761	6th Nov. 1863	Colin Minton Campbell.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
TURNING; LATHES FOR TURNING.			
Manufacture of knobs and other articles in china and earthenware.	875	7th April 1863	James Macintyre.
Screw cutting lathes - - - -	912	10th April 1863	Josiah Gimson.
Improvements in the manufacture of and in the machinery and appliances for holding, drilling, turning, tapping, fitting and shaping certain parts of steam, water, gas and lamp fittings.	1041	25th April 1863	John Thomas Stroud.
A new and useful device for turning crosshead wrists or pins or for turning any cylindrical part of machinery which is secured between two arms. (*Communicated by Walter Scott Phelps.*)	1416	8th June 1863	William Clark.
Improvements in parallel turning and in machinery for that purpose.	2475	9th Oct. 1863	Joseph Elsom.
Apparatus for transmitting motive-power - - (*To lathes.*)	3129	11th Dec. 1863	John Cliff.
Improved machinery for manufacturing casks -	3166	15th Dec. 1863	James Davidson.
Apparatus for forging and tempering bayonet blades, files and other articles. (*Communicated by Hervey Waters.*)	3251	23rd Dec. 1863	George Tomlinson Bousfield.
Lathes for turning - - - -	3254	23rd Dec. 1863	Samuel Bradley Ardrey. Samuel Beckett. Walton Smith.
UMBRELLAS, PARASOLS, UMBRELLA FURNITURE AND COVERS; WALKING-STICKS.			
Improvements in apparatus for casting or moulding articles in glass and in imitation of precious stones or marbles. (*Handles for umbrellas, &c.*)	184	21st Jan. 1863	Adolphe Boubee.
Fastenings of umbrellas and parasols - -	234	27th Jan. 1863	William Gilpin. Josiah Hiatt.
Articles or means for supporting or carrying ladies' parasols, bags or other articles or appendages.	743	20th March 1863	Richard Couchman.
Machinery or apparatus for manufacturing the ornamental tips of parasols, umbrellas and similar articles. (*Communicated by Leon Sestier.*)	871	6th April 1863	Edward Thomas Hughes.
Improvements in umbrellas, parasols, sunshades, walking sticks and whips, and in brooches and other ornaments.	1452	11th June 1863	John Francis Kain.
Manufacture of umbrellas and parasols - -	1826	21st July 1863	James Engleburtt Vanner.
Manufacture of umbrellas and parasols - -	1867	27th July 1863	Joseph Pain.
Manufacture of umbrellas and parasols - -	1911	1st Aug. 1863	James Engleburtt Vanner
Construction of frames for umbrellas and parasols -	1944	6th Aug. 1863	Gabriel Emile Charageat.
An improved mixed fabric and in the application thereof to covering umbrellas and parasols.	2273	16th Sept. 1863	Robert Thomson.
Improvements in umbrellas and parasols, and in parts thereof.	2275	16th Sept. 1863	Robert Harrington.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
UMBRELLAS, &c.—*continued.*			
Articles or instruments for supporting, holding or carrying parasols, bags, watches, ornaments or other articles or appendages.	2309	19th Sept. 1863	Richard Couchman.
Manufacture of runners, runner notches and top notches for umbrellas and parasols.	2451	7th Oct. 1863	Joseph Caddick.
An improved walking stick umbrella	2469	8th Oct. 1863	Robert Green Watson. William John Kendall.
Improvements in parallel turning and in machinery for that purpose. (*Umbrella handles.*)	2475	9th Oct. 1863	Joseph Elsom.
An improved construction of walking stick umbrella	2577	20th Oct. 1863	Thomas Restell.
An improved clasp or fastening for gloves or other wearing-apparel, for umbrellas, travelling bags or other similar objects.	2631	24th Oct. 1863	Louis Joseph Hannart.
Improved covers for umbrellas, parasols or sun-shades.	2850	14th Nov. 1863	William Alexander Lyttle.
Frames for umbrellas and other like articles, and petticoats or skirts.	2977	26th Nov. 1863	James Chesterman.
A new method of bending the reverse ends of partridge canes and bending partridge canes without roots.	3022	2nd Dec. 1863	Robert Lublinski.
UPHOLSTERY (*Mattresses, Beds, Cushions, Curtains, Curtain Rods, Cornice Poles*); **RUGS, MATS AND MATTING.**			
Producing designs upon velvets, cloth, furniture hangings and similar materials. (*Communicated by Alphonse Eymin and Jean Marie Tourres.*)	17	2nd Jan. 1863	Edward Thomas Hughes.
Apparatus for beating mats, rugs and other such like articles.	190	21st Jan. 1863	Albert Pennington.
Improvements in fabrics for covering floors, walls, roofs and other surfaces or objects, which fabrics are also partly applicable to the manufacture of waterproof articles. (*Carpeting.*)	232	27th Jan. 1863	Henry Henson Henson.
Mode of constructing spring mattrasses and other such articles for sitting and reclining upon	400	14th Feb. 1863	William Crane Paul. Alfred Thomas Shaw.
Mats	527	25th Feb. 1863	Henry Henson Henson.
Spring bed bottom (*Or mattress.*)	604	4th March 1863	Amedée Paul, jeune.
Tanning hides and skins (*For carpetings.*) (*Communicated by Jean Baptiste Vanrymenant.*)	1157	8th May 1863	Evariste Chamonin Boët.
Spring mattresses (*Communicated by Madame Julie Adolphine Massé.*)	1195	12th May 1863	Richard Archibald Brooman.
Spring mattresses, sofas, chairs, seats, and similar articles. (*Communicated by Marc Louis Denis.*)	1196	12th May 1863	Richard Archibald Brooman.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
UPHOLSTERY, &c.—*continued.*			
An improved method of preserving carpets from the effects of dust.	1395	4th June 1863	Mme. Veuve Leon de Wailly.
Moulding and vulcanizing articles of india-rubber (*Mats.*)	1506	16th June 1863	Josiah George Jennings. Manuel Leopold Jonas Lavater.
Improvements in weaving piled and other fabrics, and in the machinery or apparatus connected therewith. (*Hearth rugs.*)	1686	7th July 1863	John Orr.
Pins or hooks for suspending fabrics, dresses or parts of dresses, curtains, and other articles of upholstery or apparel.	1716	9th July 1863	William Tent.
An improved mode of attaching hooks to furniture or fabrics for suspending dresses or parts of dresses, fabrics, curtains, and other articles of upholstery or apparel - - - -	1788	16th July 1863	Agatha Montleart. William Tent.
Air and water beds, pillows, bolsters, and cushions	1816	20th July 1863	Frederick Ayckbourn.
Improvements in the manufacture of mats, floor-cloths or coverings for floors, straps, bands, ropes and other analogous articles, which are usually made of textile or fibrous materials. (*Communicated by Placide Peltereau.*)	1831	21st July 1863	William Edward Newton.
Application of india-rubber and gutta-percha to the manufacture of brushes and mats. (*Communicated by Anthony Pollak.*)	1963	8th Aug. 1863	Astley Paston Price.
Manufacture of spring mattresses - - -	2068	20th Aug. 1863	William Hamilton.
Certain improvements in the manufacture of nails and other similar articles. (*For upholsterers.*)	2174	3rd Sept. 1863	Amand Louis Durand.
Improvements in cutting or finishing matting and similar fabrics, and in the machinery used therefor.	2265	16th Sept. 1863	Andrew Fleming.
Improvements in parallel turning and in machinery for that purpose. (*Cornice poles.*)	2475	9th Oct. 1863	Joseph Elsom.
An improved pillow - - - - (*Communicated by Ernest Loriot.*)	2643	26th Oct. 1863	William Edward Gedge.
An improved mattress for beds - - - -	2681	30th Oct. 1863	John Nash.
Beds and bedding - - - - -	2719	3rd Nov. 1863	John Peter Booth.
Improvements in the mode of and apparatus for preparing cork stuffing for mattresses, pillows, cushions and other articles, and in the mode of applying the cork stuffing thereto. (*Communicated by Anton Courlander Crondal.*)	3099	8th Dec. 1863	Alfred Vincent Newton.
Preparation or manufacture of cocoa nut fibre for matting purposes.	3125	11th Dec. 1863	Edward Shepherd.
Spring mattresses or beds and cushions - -	3229	21st Dec. 1863	Victor Beare Fitz Gibbon.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
VALVES, TAPS, STOP-COCKS, PLUGS; REGULATING THE FLOW AND PRESSURE OF FLUIDS.			
Hydrostatic presses	87	10th Jan. 1863	Robert Lüthy.
An improvement in piston valves and other pistons (*Communicated by Thomas Shrimton Davis.*)	201	22nd Jan. 1863	William Clark.
Apparatus for drawing off water or other fluids	203	22nd Jan. 1863	Thomas Lambert.
Improvements in boilers for steam-engines and in valves to be used therewith.	205	22nd Jan. 1863	Francis William Morley.
Steam-engines	206	23rd Jan. 1863	John Milner.
Valve taps	372	11th Feb. 1863	David Radcliffe.
Throttle valves	482	21st Feb. 1863	Anthony Dugdale.
Improvements in valves and in apparatus connected therewith.	507	24th Feb. 1863	Edward Ross Walker.
Apparatus for the production and transmission of gas or other fluids	513	24th Feb. 1863	George Bower. William Hollinshead.
Apparatus for regulating the flow of gas for purposes of illumination	524	25th Feb. 1863	Benjamin Lawrence. William Niblett.
Escape or relief valves to the cylinders of marine and other steam-engines.	572	28th Feb. 1863	John Penn.
Valves	691	14th March 1863	William West.
Taps or valves	692	14th March 1863	John Page.
Vent pegs	939	14th April 1863	Henry Trapnell.
Improvements in furnaces and boilers for the generation of steam, partly applicable also for other purposes. (*Construction of fusible plugs.*)	942	14th April 1863	John Smith.
Ball cocks	1017	24th April 1863	John Lambert.
Valves for water, steam and gas	1031	25th April 1863	Albert Henry Clark. Henry Hope.
Safety valves (*Communicated by Johann Andreas Schubert.*)	1038	25th April 1863	Charles Beyer.
Improvements in the manufacture of and in the machinery and appliances for holding, drilling, turning, tapping, fitting and shaping certain parts of steam, water, gas and lamp fittings.	1041	25th April 1863	John Thomas Stroud.
Improvements in engines, machinery and apparatus for obtaining compressed air, and for applying the power thereof in propelling railway and other carriages	1092	30th April 1863	Charles Patrick Stewart. John Kershaw.
Improvements in drainage and in water closets, and in the means and apparatus necessary for the same respectively.	1096	1st May 1863	Edward Jones.
Apparatus for straining and drawing off liquids	1105	2nd May 1863	Samuel John Bartlett.
Construction of cocks or valves	1214	14th May 1863	James Burrell.
Improvements in the means of transmitting power on railways worked by vacuum or the pressure of air, and in the apparatus to be employed for such purpose.	1269	21st May 1863	George Rogers Harding.
Apparatus for bottling liquids or for drawing or letting off at the same time, liquids from several different casks or vessels.	1317	25th May 1863	Richard Hayward.
Blast engines	1331	27th May 1863	Hiram Craven Coulthard.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
VALVES, &c.—*continued.*			
Valves and apparatus for regulating the speed of steam-engines - - - - - - (*Partly communicated by Frederic Perry.*)	1377	2nd June 1863	George Allam Barrett. William Exall. Charles James Andrewes. Alfred Barrett.
Certain improvements in steam-engines, steam-boilers and steam heating apparatus.	1399	5th June 1863	Francis Alton Calvert.
Improvements in slide and other valves and apparatus connected therewith.	1443	10th June 1863	Thomas Adams.
Improvements in steam fire-engines, parts of which improvements are applicable to steam-boilers and to pumps generally.	1474	12th June 1863	Henry Stracey Barron.
Certain improvements in engines for obtaining motive-power from steam or other liquid, also partly applicable to pumps. (*Communicated by John Benjamin Root.*)	1499	15th June 1863	William Clark.
Valves for the passage of steam, gas and fluids -	1501	16th June 1863	James John Shedlock.
Apparatus for compressing, holding and regulating the pressure of gas.	1523	17th June 1863	William Naylor.
Improvements in lessening the friction of the rubbing surfaces of the slide valves of engines, and of the journals of shafts - - -	1583	23rd June 1863	William Louis Winans. Thomas Winans.
Rotary engines - - - - - -	1621	29th June 1863	Cyrus Avery.
Improvements in apparatus for reducing and regulating the pressure or quantity of steam, and in discharging the water of condensed steam from cylinders, pipes and other vessels.	1633	1st July 1863	John Blake.
Construction of vents for casks and other vessels -	1741	13th July 1863	Robert Doyne Dwyer.
Cocks or taps - - - - -	1790	16th July 1863	Obed Wakefield.
Improvements in safety valves and in apparatus connected therewith.	1830	21st July 1863	William Naylor.
Apparatus for extinguishing chimney fires and in preventing explosions.	1842	23rd July 1863	Louis Laurent Jacques Fillion.
Certain improvements in valves for steam-engines -	1922	4th Aug. 1863	Samuel Bury. John Price.
Apparatus for regulating the speed of steam and hydraulic engines.	1938	6th Aug. 1863	Joseph Gustave Pinède.
Self-acting valves and traps for sewers - -	1940	6th Aug. 1863	John Fenwick.
Taps or stop cock apparatus - - - (*Communicated by François Jean Cantagrel.*)	1943	6th Aug. 1863	William Clark.
Improvements in apparatus for containing and distributing gas for lighting railway carriages, steam boats, and other moveable vehicles and vessels, railway stations and other places, parts of such apparatus being suitable for governing the supply of gas and air for various purposes.	1978	11th Aug. 1863	John Thomson King.
Improvements in steam-boilers and in apparatus connected therewith.	2130	28th Aug. 1863	Joseph Walls.
Valves, taps or cocks - - -	2170	2nd Sept. 1863	Charles Harvey Corlett.
Improved apparatus for directing motion in right lines. (*Working slide valves.*) (*Communicated by Andrew Buchanan and William Alexander Righter.*)	2201	7th Sept. 1863	Alfred Vincent Newton.
Apparatus for governing and stopping the flow or passage of fluids.	2246	12th Sept. 1863	James Crellin.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
VALVES, &c.—*continued.*			
An improved gas cock of elastic and continuous pressure.	2278	17th Sept. 1863	Zacharie Joseph Mercier.
Taps - - - - - - (*Communicated by Jean Louis de Waroquier.*)	2284	17th Sept. 1863	Richard Archibald Brooman.
Construction of valves and cocks for steam, water, gas and other fluids.	2290	18th Sept. 1863	James Allen.
Barometers, gas regulators, and other apparatuses for regulating and indicating the flow and pressure of liquids and fluids - - -	2383	28th Sept. 1863	John Bailey. George William Blake. William Henry Bailey.
Water-closets - - - - -	2392	29th Sept. 1863	Peter Llewellen. John Llewellen. John Wanklyn James.
A new kind of conical packing for taps - -	2395	30th Sept. 1863	Henry Edward Skinner.
Improvements in taps, cocks, hydrants or valves, and apparatus connected therewith, for opening, closing, regulating and facilitating and otherwise controlling the passage or flow of water, air, steam, gas and other fluids and liquids.	2432	5th Oct. 1863	Charles Tomlison.
Improvements in steam-engines and in furnaces and boilers for the same.	2437	5th Oct. 1863	Thomas Ivory.
High pressure cocks - - - - -	2452	7th Oct. 1863	George Frederick Graham.
Improvements in taps or cocks, part of which improvements is applicable to the lubrication and protection of the journals of revolving shafts, axles or spindles.	2492	12th Oct. 1863	Alexander Inglis.
Valves for double cylinder steam-engines - -	2516	14th Oct. 1863	Joseph Inchley.
Improvements relating to watercloset and other valves or taps.	2539	17th Oct. 1863	John Shanks.
Vent apparatus for facilitating the drawing off or letting off fluids.	2569	20th Oct. 1863	John Bryant.
Steam-engines - - - - - -	2588	21st Oct. 1863	Zerah Colburn.
An improved valve and valve gear for regulating the passage or flow of fluids - - -	2598	22nd Oct. 1863	John Walter Friend. Baldwin Fulford Weatherdon.
Improvements in atmospheric railways and in carriages for the same.	2635	24th Oct. 1863	Alexander Alison.
Improved equilibrium valves for steam-engines and other purposes - - - - -	2667	28th Oct. 1863	Richard Needham. James Pollitt.
Taps, cocks or valves - - - - (*Communicated by Henri Jerimie Cristen.*)	2684	30th Oct. 1863	Walter Montgomery Neilson.
Machinery for raising and forcing fluids, parts of which improvements are also applicable to steam-engines, blast engines, exhausters and other machines.	2707	31st Oct. 1863	Stephen Holman.
Manufacture of bricks, drain pipes, traps, sewage tanks, and water-closet pans and valves, and the machinery and apparatus necessary for the same.	2708	31st Oct. 1863	Edward Jones.
Steam hammers - - - - - -	2715	3rd Nov. 1863	David Davy, junior.
Taps or cocks for liquids or gases - -	2716	3rd Nov. 1863	John Macintosh.
Improvements in safety valves for steam-boilers, and in valves and taps for regulating the flow of fluids.	2745	5th Nov. 1863	Sydney Smith.
Taps - - - - - - -	2791	10th Nov. 1863	Samuel John Bartlett.
Improvements applicable to safety valves and pressure or temperature gauges.	2794	10th Nov. 1863	James Mash.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
VALVES, &c.—*continued.*			
Construction of water-closets	2835	13th Nov. 1863	George Kennedy Geyelin.
Improvements in taps or valves, in pipe joints, and in the valvular mechanism of water-closets	2865	16th Nov. 1863	Samuel Cameron. William Johnston.
Gas-meters	2878	17th Nov. 1863	William Cowan.
Improvements in the construction of blast cylinders, and also in the form and method of working the valves of the same.	2902	19th Nov. 1863	William Henry Gray.
Improvements in steam-engines and in apparatus connected therewith. (*Communicated by Richard Bristol.*)	2927	20th Nov. 1863	John Henry Johnson.
Improvements in the construction of sluice and other cocks or valves, and in the means of connecting them and the ends of flexible hose pipes together.	3003	30th Nov. 1863	Charles Pontifex.
Improvements in gas stoves for heating irons and other purposes, and in the construction of irons to be heated and used therewith.	3042	3rd Dec. 1863	David Hulett.
Improvements in heating, parts of the invention being applicable to other purposes (*Thermometric valve.*)	3055	5th Dec. 1863	Samuel Alfred Varley. Cromwell Fleetwood Varley.
Apparatus for regulating the passage of aëriform and other fluids. (*Communicated by Charles Joseph Louis Meynard.*)	3096	8th Dec. 1863	Michael Henry.
Generators for making gas from volatile fluids	3136	12th Dec. 1863	Thomas Clayton.
Atmospheric railways	3191	18th Dec. 1863	Alexander Alison. James Halliwell.
Taps, cocks or faucets (*Communicated by John Broughton.*)	3200	19th Dec. 1863	John Macarthy.
Improvements in steam engines and boilers, and in processes or apparatus to be employed in working the same.	3212	19th Dec. 1863	James Howden.
Mode of and apparatus for controlling the passage of fluids to and from casks and other vessels. (*Communicated by the Société Hermann Lachapelle et Glover.*)	3226	21st Dec. 1863	Michael Henry.
Apparatus for drawing off and measuring fluids	3263	24th Dec. 1863	Henry Philip Forrest.
Slide valves (*Communicated by Louis Amédée Lemaire.*)	3279	28th Dec. 1863	William Clark.
VENTILATION; SUPPLYING AND PURIFYING AIR FOR BUILDINGS, MINES, SHIPS, CARRIAGES, &c.			
Construction of hats and other coverings for the head.	209	23rd Jan. 1863	Charles Stopford.
Construction of granaries (*Communicated by Louis Jean Gustave de Coninck.*)	262	29th Jan. 1863	Henri Adrien Bonneville.
Improvements in supplying air, gases, steam or fluids to iron and other furnaces, and to engines and vessels requiring such supply, and in the apparatus employed therein.	291	31st Jan. 1863	Edward Brown Wilson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
VENTILATION, &c.—*continued.*			
Means or apparatus for effecting a regular supply of air or aëriform fluids for various purposes.	335	6th Feb. 1863	George Stevens.
Ventilation of ships and vessels, and apparatus connected therewith.	535	26th Feb. 1863	Henry Edmonds, M.D.
Improvements in horticultural buildings and other glazed structures, part of which improvements is also applicable to ventilating other buildings.	624	5th March 1863	John Miller.
An improved composition for the coating and preservation of canvas and other materials, to make them waterproof and non-inflammable. (*For ventilation of mines.*)	735	19th March 1863	Ellis Lever.
Improved means for ventilating mines - -	753	21st March 1863	Isaac Mark Evans. William Thomas Griffiths.
Constructing surface condensers and apparatus for heating and cooling fluids. (*For ventilation.*)	1052	27th April 1863	Julius Jeffreys.
Improvements in drainage and in water-closets, and in the means and apparatus necessary for the same respectively.	1096	1st May 1863	Edward Jones.
Manufacture of elastic material - - - - - (*Rendering self-ventilating.*) (*Communicated by Gustave Mayer.*)	1229	16th May 1863	Benjamin Browne.
An improved apparatus for saving from destruction by fire persons and property in houses, buildings and ships, and also for ventilating ships. (*Communicated by James Partridge.*)	1256	19th May 1863	Abraham Parker.
Chimneys, fire-places, stoves and flues for warming and ventilating apartments - -	1296	23rd May 1863	Samuel Egan Rosser. Josiah George Jennings.
Improvements in the construction of the frames, sashes, shutters, blinds and ventilators for windows or other openings, part of which improvements are also applicable to other constructive purposes.	1315	25th May 1863	John Hilliar.
An improved system of ventilation applicable to every description of dwelling place and building.	1636	1st July 1863	Thomas Boyle.
An improved apparatus for fanning or for agitating air.	1669	4th July 1863	Alfred Norman.
A new method of waterproofing and ventilating boots, shoes and slippers, for preventing wet and damp feet - - - - -	1700	8th July 1863	Rebecca Tallerman. Lewis Abraham Tallerman.
Construction and arrangement of dwelling houses in combination with the means employed for ventilating the same.	1740	13th July 1863	James Mortimer.
Ventilators - - - - -	1825	21st July 1863	Edward Thomas Bainbridge.
Improvements in ventilating hay, corn and other ricks, and in apparatus connected therewith.	1873	28th July 1863	Douglas Taylor.
Means or apparatus for effecting a regular supply of air or aeriform fluids for various purposes.	1921	4th Aug. 1863	George Stevens.
An improved method of fire-proof construction for buildings, by the use of arches formed of concrete.	1998	13th Aug. 1863	Charles Colton Dennett.
Improvements in chimney tops, which improvements are also applicable to coverings for ventilating shafts or flues for mines and other places.	2049	18th Aug. 1863	Thomas Dobb.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
VENTILATION, &c.— *continued.*			
An improved ventilating gas lamp or gasalier -	2074	21st Aug. 1863	James France Hill.
Improved means of and apparatus for employing vapours, gases and the heat derived from combustible matters. (*For ventilation.*)	2241	11th Sept. 1863	Louis Meyer.
Improvements in the mode of manufacturing submarine telegraph cables, in apparatus connected therewith, and in the method or principle of laying same, and in the preparation of the several compounds described for electric insulation and other purposes.	2386	29th Sept. 1863	Frederick George Mulholland.
Improvements in the manufacture of iron and other metals, and in the apparatus employed therein, parts of which are applicable for other purposes where high temperatures are employed, and also for ventilation.	2425	3rd Oct. 1863	Edward Brown Wilson.
An improved method of extinguishing fires in chimneys and flues, regulating and promoting draught therein, calculated also to act as a ventilator.	2481	9th Oct. 1863	Noah Fellows.
Buildings used for drying bricks, tiles and other articles.	2526	15th Oct. 1863	Henry Clayton.
An improved apparatus for ventilating railway and other carriages, houses, buildings, steam and sailing vessels of all kinds moveable or otherwise.	2530	15th Oct 1863	Stephen Flexen.
Ventilators and fire-guards - - - -	2712	2nd Nov. 1863	Thomas Fitzgerald Wintour.
Fans for forcing and exhausting air or other gases -	2726	4th Nov. 1863	Edward Hughes.
An improved machine adapted for performing various mining operations, such as working or cutting coal or other analogous substances in mines, forcing water from mines and air thereunto - - - - - - - -	2786	9th Nov. 1863	Ralph Henry Philipson. John Dees.
Construction of fan blowers for ventilating and other purposes. (*Communicated by Milton Nobles.*)	2924	20th Nov. 1863	William Edward Newton.
Apparatus for lighting and ventilating - -	3033	2nd Dec. 1863	Joseph Cutler.
Apparatus used for heating and ventilating horticultural buildings.	3094	8th Dec. 1863	Peter Rigby Wason.
Improvements in malt and hop kilns, which improvements are partly applicable to the ventilation and warming of buildings, and to the drying of various substances.	3124	11th Dec. 1863	Alexander Epps.
VICES, WRENCHES, FORCEPS, RATCHET BRACES.			
Tongs or forceps for grasping articles out of reach of the hand - - - - - - (*Removing articles from furnaces.*)	403	14th Feb. 1863	William Baylis. Thomas Henry Hopwood.
Ratchet levers - - - - - (*For ratchet braces.*)	974	18th April 1863	Thomas Aldridge Weston

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
VICES, &c.—*continued.*			
Adjustable wrenches for nuts, pipes, and pins	987	21st April 1863	Joshua Heap.
Wrenches (*Communicated by Louis Schwartzkopff.*)	994	21st April 1863	William Edward Newton.
Construction of pipe wrenches	2340	22nd Sept. 1863	William Cleminson.
Wrenches	2524	15th Oct. 1863	Richard Bewley, junior.
Improvements in self-acting machinery or apparatus worked by steam or other power, for cutting and shaping the soles and heels of boots and shoes, and screwing them on to the uppers or coverings, and also in vices for holding the same, and tools for paring, blacking, and glazing or otherwise ornamenting the edges of the soles and heels	2755	6th Nov. 1863	Charles Henry Southall. Robert Heap.
WASHING, CLEANSING AND WRINGING FABRICS, YARNS AND MATERIALS.			
Wringing-machines	75	9th Jan. 1863	Carroll Eugene Gray.
Construction of air tight boxes, cases, cupboards and similar vessels. (*Wash boxes.*)	276	29th Jan. 1863	Frederick George Stuber.
Machinery or apparatus for washing, wringing, and mangling clothes or other textile fabrics.	312	4th Feb. 1863	Thomas Bradford.
Apparatus and processes for steeping, boiling, washing, bleaching and dyeing fibrous materials or slivers, slubbings, rovings, yarns or woven fabrics of the same	367	10th Feb. 1863	William Whitaker. William Tongue.
Washing-machines	426	17th Feb. 1863	Thomas Wilson Salmon.
Process of cleaning organic matter (*Wool.*) (*Communicated by François Théophile Moison.*)	486	23rd Feb. 1863	Edward Thomas Hughes.
Machinery or apparatus for washing or cleansing and drying Egyptian wheat, beans and other kinds of grain or seeds.	699	14th March 1863	James Walworth.
Machines or apparatus for washing and wringing clothes or fabrics	749	20th March 1863	George Coles. James Archibald Jaques. John Americus Fanshawe
Machinery for scouring wool (*Communicated by Jean Henri Chaudet and Firmin Natalis Thuillier.*)	803	27th March 1863	Richard Archibald Brooman.
Machinery for washing and drying wool and other fibres and rags, also in tentering, stretching and drying fabrics.	890	8th April 1863	James Lee Norton.
An improved machine or apparatus for washing, squeezing, mangling and churning.	943	15th April 1863	James Leach.
Improved machinery for scouring, washing and cleansing woollen cloths and other fabrics.	1074	28th April 1863	Samuel Stephens Marling
Improved apparatus for fulling woollen cloths, and washing and cleansing woven fabrics.	1097	1st May 1863	William Clissold.
Washing-machines	1101	2nd May 1863	William Thomas Smith.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WASHING, &c.—*continued.*			
Machinery or apparatus for washing wool and other fibrous materials.	1426	8th June 1863	John Petrie.
Improved means of attaching boxes or receptacles to hold soap, black lead or similar household articles, to the sides of wash tubs, pails, or house boxes.	1675	6th July 1863	Thomas William Coulder
An improved machine for wringing clothes -	2132	29th Aug. 1863	Henry William Putnam.
Portable mangling and wringing apparatus -	2200	7th Sept. 1863	Harper Twelvetrees.
Improvements in printing on certain and other terry and velvet pile carpets, felted cloths, and other fabrics and materials, and in the processes and apparatus connected therewith.	2207	8th Sept. 1863	Joseph Burch.
An improved method of preparing the fibres of hemp, flax and other vegetable materials for manufacturing purposes.	2258	14th Sept. 1863	George Whitfield Billing
Washing-apparatus - - - - - (*Communicated by William Bamford.*)	2460	7th Oct. 1863	George Whight.
Apparatus for washing, scrubbing, scouring, bleaching and discharging impurities or other matters from woven or other fibrous materials.	2515	14th Oct. 1863	John Rowley.
Washing-machines - - - - - (*Communicated by Doctor Isidore Sollier and Baron Gerard Dedel.*)	2546	17th Oct. 1863	John Henry Johnson.
Wringing-machines - - - - -	3049	4th Dec. 1863	Welburn Williamson.
Improvements in washing textile fabrics and in the machinery or apparatus employed therein. (*Communicated by Madame Rosine Saiglan Bagnères.*)	3062	5th Dec. 1863	John Henry Johnson.
Washing, wringing and mangling machines -	3128	11th Dec. 1863	Nicholas Walton.
Washing-machinery - - - - - (*Communicated by Thomas Mayall.*)	3147	12th Dec. 1863	George Tomlinson Bousfield.
For Washing Ores, *see* "METALS." *For* Washing Bottles, *see* "BOTTLES." *For* Washing Casks, *see* "CASKS." *For* Washing Coals, *see* "FUEL." *For* Washing Potatoes, *see* "PRESERVING FOOD." *For* Washing Corn, *see* "THRASHING." *For* Washing Clay, *see* "BRICKS."			
WATER-CLOSETS, URINALS AND COMMODES.			
Improvements in drainage and in water-closets, and in the means and apparatus necessary for the same respectively.	1096	1st May 1863	Edward Jones.
Apparatus for intercepting the solid portions of the soil of water-closets.	1118	5th May 1863	Edwin Chesshire.
Certain improvements in carriages and vehicles for railways and other roads. (*With water-closet.*)	1310	25th May 1863	Paul Leprovost.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WATER-CLOSETS, &c.—*continued.*			
Improvements in covers or appliances for the rims, borders or top edges of chamber utensils, applicable also to commodes and water-closets.	1552	20th June 1863	Henry Macaulay.
Improvements in the construction of soil pits and in the mode of emptying the same. (*Communicated by Adolphe Kolb and Théodore de Lévenhagen.*)	1722	10th July 1863	James John Shedlock.
Water-closets, commodes, slop pails and other like apparatus or utensils.	1818	20th July 1863	Robert Weare.
Improvements in expelling solid and liquid refuse matter from steam and sailing ships, below the water line, applicable also for discharging cannon below water, from ships and forts, and in part for charging gas retorts and iron furnaces, and for other similar useful purposes. (*Communicated by John Palmer.*)	1843	23rd July 1863	Matthew Augustus Soul.
An improved self-acting "flushing" apparatus - (*For urinals.*) (*Communicated by Louis Melotte.*)	1880	29th July 1863	Henri Adrien Bonneville.
Valves, taps or cocks - - - - (*For urinals.*)	2170	2nd Sept. 1863	Charles Harvey Corlett.
Privies or closets to be used in place of water-closets.	2198	7th Sept. 1863	Josias Bull York.
Privies or closets to be used in place of water-closets.	2218	9th Sept. 1863	Josias Bull York.
Water-closets - - - -	2392	29th Sept. 1863	Peter Llewellen. John Llewellen. John Wanklyn James.
Improvements in taps, cocks, hydrants, or valves and apparatus connected therewith, for opening, closing, regulating and facilitating and otherwise controlling the passage or flow of water, air, steam, gas and other fluids and liquids. (*For water-closets, &c.*)	2432	5th Oct. 1863	Charles Tomlison.
Improvements relating to water-closet and other valves or taps.	2539	17th Oct. 1863	John Shanks.
An improved valve and valve gear for regulating the passage or flow of fluids - - -	2598	22nd Oct. 1863	John Walter Friend. Baldwin Fulford Weatherdon.
Manufacture of bricks, drain pipes, traps, sewage tanks and water-closet pans and valves, and the machinery and apparatus necessary for the same.	2708	31st Oct. 1863	Edward Jones.
Apparatus for regulating and controlling the supply of water to water-closets and other purposes - - - - -	2801	11th Nov. 1863	Thomas Mellard Reade. Joshua Hewitt.
Construction of water closets - - -	2835	13th Nov. 1863	George Kennedy Geyelin.
Improvements in taps or valves, in pipe joints, and in the valvular mechanism of water-closets	2865	16th Nov. 1863	Samuel Cameron. William Johnston.
Stink traps for water-closets, sinks and other purposes.	2973	26th Nov. 1863	James Simmonds.
Means or apparatus for supplying water to water-closets and urinals.	2991	28th Nov. 1863	Charles Cordon.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WATERING; SUPPLYING AND DISTRIBUTING WATER; FOUNTAINS.			
Apparatus for applying water or other fluid to the legs and other parts of horses and other animals. (*See* "MEDICAL TREATMENT.")	176	20th Jan. 1863	Samuel Blackwell.
Syphons applied to draining, irrigation and other purposes, whereby they self-suspend and resume action according to requirements. (*Communicated by François Triballat.*)	221	24th Jan. 1863	William Clark.
Fountains - - - - - -	269	29th Jan. 1863	Jean Nadal.
A new method of and apparatus for boring into water and gas supply pipes, and fixing branch pipes thereon. (*Communicated by Edme Ernest Mathelin and Pierre Lucien Mathelin.*)	556	27th Feb. 1863	Richard Archibald Broman.
Improved machinery for obtaining and applying motive-power. (*For irrigation.*)	653	9th March 1863	Pierre Hugon.
Certain apparatus for injecting and ejecting fluids - - - - - -	744	20th March 1863	Andrew Barclay. Alexander Morton.
Nozzles for hose and water discharge pipes - (*Communicated by Consider Harvey Morrison.*)	1425	8th June 1863	William Edward Newton.
Construction of fountains - - -	1436	9th June 1863	Michel Siegrist.
"Warping" or covering land, bog or peat with earth or soil.	1762	14th July 1863	William Wood.
An improved self-acting "flushing" apparatus - (*Communicated by Louis Melotte.*)	1880	29th July 1863	Henri Adrien Bonneville.
Valves, taps or cocks - - - - -	2170	2nd Sept. 1863	Charles Harvey Corlett.
Apparatus for governing and stopping the flow or passage of fluids.	2246	12th Sept. 1863	James Crellin.
Portable fire and garden engines - - -	2321	21st Sept. 1863	William Burnet Robins.
Improvements in taps, cocks, hydrants or valves and apparatus connected therewith, for opening, closing, regulating and facilitating and otherwise controlling the passage or flow of water, air, steam, gas and other fluids and liquids. (*For irrigation, &c.*)	2432	5th Oct. 1863	Charles Tomlison.
Construction of ornamental fountains - -	2797	10th Nov. 1863	Joseph Cutler.
Means or apparatus for supplying water to water-closets and urinals. (*Or to cisterns.*)	2991	28th Nov. 1863	Charles Cordon.
Improvements in steam apparatus for raising and forcing water, applicable to steam navigation and waterworks in general.	3162	15th Dec. 1863	Victor de Stains, B.A.
Improvements in apparatus for exhibiting the flow of real water and other effects, applicable to theatrical purposes.	3272	26th Dec. 1863	Edward Tyrrel Smith.
An improved pneumatic apparatus for filling barrels used for watering roads and other purposes.	3285	29th Dec. 1863	Louis Edouard Desestre.
See also "VALVES." For Water Pipes, *see* "PIPES."			

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WATERPROOFING AND FIREPROOFING; WATERPROOF AND FIREPROOF FABRICS; COMPOSITIONS FOR WATERPROOFING, &c.			
Compound waterproof and ornamental fabrics -	57	7th Jan. 1863	Thomas Storey.
Rendering drum skins and gut strings less liable to hygrometric influences.	222	24th Jan. 1863	Antoine Joseph Sax.
Improvements in fabrics for covering floors, walls, roofs and other surfaces or objects, which fabrics are also partly applicable to the manufacture of waterproof articles.	232	27th Jan. 1863	Henry Henson Henson.
An improved method of preserving the contents of packages from air, water or damp.	272	29th Jan. 1863	Arthur Pritchard.
Construction of air-tight boxes, cases, cupboards and similar vessels.	276	29th Jan. 1863	Frederick George Stuber.
An improved composition for the coating and preservation of canvas and other materials, to make them waterproof and non-inflammable.	735	19th March 1863	Ellis Lever.
An improved composition for rendering cloth, paper and similar articles transparent and waterproof. (*Communicated by James Hodgskin.*)	824	31st March 1863	Edward Thomas Hughes.
An improvement in waterproof compounds and in fabrics prepared therewith.	988	21st April 1863	Edwin Lindsey Simpson.
Manufacture of waterproof fabrics - - - (*Communicated by John Foster Greene.*)	1288	22nd May 1863	William Edward Newton.
Improved machinery for the manufacture of waterproof fabrics. (*Communicated by John Foster Greene.*)	1289	22nd May 1863	William Edward Newton.
Improvements in making portmanteaus and trunks of various shapes and sizes, light, strong, air-tight and water-tight, capable of bearing immersion in water without injuring the contents.	1562	22nd June 1863	Edwin Wilks.
An improved waterproof material - - - (*Communicated by Jules Wiese.*)	1635	1st July 1863	William Snell.
An improved composition for waterproofing, softening and preserving all kinds of leather and articles made therefrom.	1648	2nd July 1863	Edward Lloyd.
A new method of waterproofing and ventilating boots, shoes and slippers, for preventing wet and damp feet - - - - - -	1700	8th July 1863	Rebecca Tallerman. Louis Abraham Tallerman.
Improvements in making all woven and thready fabrics waterproof, and in finishing or surfacing fabrics generally. (*Communicated by Etienne Guillaume.*)	1836	22nd July 1863	Charles Beslay.
A waterproof preparation to make fabrics, thread, textile matters and others impenetrable against water.	2020	15th Aug. 1863	Pierre François Louis Bienvaux Him.
Improved solutions to be used in the manufacture of paints and the preservation of wood, stone and metallic surfaces, and in the preservation and waterproofing of fibrous materials generally. (*Communicated by Richard Eaton.*)	2065	20th Aug. 1863	George Spencer.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WATERPROOFING, &c.—*continued.*			
An improved composition for rendering boots and shoes and other similar articles waterproof. (*Communicated by Mr. Louis Poncelet.*)	2553	19th Oct. 1863	Henry Gilbee.
Preparing cements and varnishes - - - (*Or waterproofing material.*)	2629	24th Oct. 1863	James Brown. John Thomas Way. Thomas Mullett Evans.
WATERWHEELS AND ENGINES; HYDRAULIC MOTIVE-POWER.			
Improvements in blowing organs and other such musical instruments, parts of which improvements are also applicable to obtaining motive-power for other purposes - - -	323	5th Feb. 1863	William Tudor Mabley. William Thomas Cheetham.
Improvements in valves and in apparatus connected therewith.	507	24th Feb. 1863	Edward Ross Walker.
Improved machinery for obtaining and applying motive-power.	653	9th March 1863	Pierre Hugon.
Improved apparatus for obtaining motive-power -	977	18th April 1863	Thomas Hunt.
A new method for obtaining motive-power -	1578	23rd June 1863	William Willcocks Sleigh.
An improved machine constructed on self-moving principles for obtaining motive-power. (*Communicated by Jules François Duhamel.*)	1667	4th July 1863	Henri Adrien Bonneville.
A new description of hydraulic engine for raising water and other fluids above their common level, the fluids so raised to be used as a motive-power	1706	9th July 1863	James Smith. Sydney Arthur Chease.
Hydraulic engines - - - - -	1712	9th July 1863	Percy Graham Buchanan Westmacott.
Obtaining hydraulic motive-power - - -	1770	15th July 1863	William Thomas Cheetham.
Apparatus for regulating the speed of steam and hydraulic engines.	1938	6th Aug. 1863	Joseph Gustave Pinède.
Improvements in apparatus for economizing or regulating water power used for blowing organs or harmoniums, which improvements are also applicable to other purposes where an irregular motive-power is desired.	2075	21st Aug. 1863	James Eccleston.
Obtaining and applying motive-power - - (*Communicated by Pierre Gardere and Charles Patek.*)	2114	26th Aug. 1863	John Henry Johnson.
Hydraulic apparatus - - - - (*See "PRESSES."*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Improvements in machinery applicable to steam and water engines (as motors), which machinery is also applicable to lift and force pumps.	2341	23rd Sept. 1863	James Platt.
Rotary engines to be worked by water, steam, air and other motive-power.	2365	25th Sept. 1863	Edward Lloyd
Rotary engines worked by steam, water or other motive-power - - - - -	2429	5th Oct. 1863	William Hoehl. Christopher Brakell William Günther.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WATERWHEELS, &c.—*continued.*			
Motive engines worked by water, steam or other motive-power - - - - (*Partly communicated by Albert Westfield.*)	2430	5th Oct. 1863	Christopher Brakell. William Hoehl. William Günther.
Obtaining motive-power by certain arrangements of machinery and water.	2652	27th Oct. 1863	Edmund Gibson Atherley.
Machinery for raising and forcing fluids, parts of which improvements are also applicable to steam-engines, blast-engines, exhausters and other machines.	2707	31st Oct. 1863	Stephen Holman.
Improvements in machinery or apparatus for measuring and registering fluids, and in obtaining motive-power from the same.	2790	10th Nov. 1863	John Ramsbottom.
An improved hydraulic motor - - -	2871	16th Nov. 1863	Isidore Pomès.
Apparatus for regulating the passage of aëriform and other fluids, (*Applicable to water-wheels.*) (*Communicated by Charles Joseph Louis Meynard.*)	3096	8th Dec. 1863	Michael Henry.
See also "GOVERNORS."			
WEARING-APPAREL, KNAPSACKS, MILITARY ACCOUTREMENTS; TAILORS' TRIMMINGS.			
Floating or life preserving coats or garments - (*Communicated by Jean Louis Vergniais.*)	431	17th Feb. 1863	Estève Deville.
An improved life preserving garment - -	510	24th Feb. 1863	Augustus Junger.
An improvement in waterproof compounds and in fabrics prepared therewith. (*For clothing.*)	988	21st April 1863	Edwin Lindsey Simpson.
Tanning hides and skins - - - - (*For knapsacks.*) (*Communicated by Jean Baptiste Vanrymenant.*)	1157	8th May 1863	Evariste Chamonin Boët.
Improvements in buttons and in fastening buttons to garments.	1224	15th May 1863	Alexander Macmillan.
Manufacture of elastic material - - - (*For knapsacks.*) (*Communicated by Gustave Meyer.*)	1229	16th May 1863	Benjamin Browne.
An improved rail or holder for coats or other articles.	1277	21st May 1863	William Henry Clapp.
Safety garments - - - - (*Communicated by André Selingue.*)	1303	23rd May 1863	Richard Archibald Brooman.
An improved binding to be used for trimming woollen cloth garments.	1312	25th May 1863	Gustav Köttgen.
Improved apparatus for pressing, smoothing and finishing garments or parts of garments.	1343	28th May 1863	Frederick Osbourn.
Gaiters and leggings - - - -	1854	24th July 1863	Bernard Birmbaum.
Diving apparatus - - - -	2118	27th Aug. 1863	James Ward.
A method of preparing mica and talc in order to render them applicable to articles of wearing-apparel and to ornamental purposes.	2154	31st Aug. 1863	George Brooks Pettit.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WEARING-APPAREL, &c.—*continued.*			
Articles or instruments for supporting, holding or carrying parasols, bags, watches, ornaments or other articles or appendages.	2309	19th Sept. 1863	Richard Couchman.
An improved fabric for the production of permanent electricity, applicable for wearing-apparel. (*Communicated by Théodore Courant.*)	2370	26th Sept. 1863	William Clark.
Certain improvements in railway wrappers - -	2480	9th Oct. 1863	Daniel Lange.
Improvements in forming stitches over the edges of fabrics and in machinery connected therewith. (*Button holes.*) (*Communicated by Abraham Hart.*)	2572	20th Oct. 1863	George Davies.
Improvements in the manufacture of saddles and harness, and in materials for and in ornamenting the same, which improvements are applicable for parts of carriages, dress and coverings for the head, and other articles. (*Knapsacks; stiffening coats, &c.*)	2579	21st Oct. 1863	Thomas Charles Clarkson.
A new attachment to coverings for the head and to other articles of dress, for lighting matches. (*Communicated by Justus Osman Woods.*)	2627	24th Oct. 1863	George Haseltine.
An improvement in or addition to military knapsacks, travelling bags and other similar articles. (*Communicated by Antoine Perrin, Henry Augustin Joseph Hovelacque, Edouard Joseph Hovelacque and Emile August Hovelacque.*)	2669	28th Oct. 1863	Michael Henry.
Machinery or apparatus for the manufacture of bonnet and cap fronts, which improvements are also applicable to the production of ornamental effects to other trimmings for wearing-apparel.	2685	30th Oct. 1863	William Gadd the younger.
Certain improvements in "skirtings" employed as wearing-apparel.	2738	5th Nov. 1863	Thomas Farra.
Manufacture of woollen garments - -	2747	5th Nov. 1863	Robert Thomas Tait.
An improvement in collars and cuffs - -	2748	5th Nov. 1863	George Speight.
Improvements in the manufacture of neck-ties, cravats and waistbands, which improvements are also applicable to other articles of wearing-apparel.	2813	12th Nov. 1863	Benjamin Peake.
Manufacture of sacks, bags and garments without seam.	2937	21st Nov. 1863	Antoine Simoneton.
Apparatus used for pressing and ironing garments -	2961	24th Nov. 1863	Peter Tait.
See also "BOOTS." "GLOVES." "HATS." "SHIRTS." "PETTICOATS."			

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WEAVING, BRAIDING, PLATTING; PREPARING FOR WEAVING.			
I.—Sizing, Warping, Beaming and Preparing Yarns for Weaving.			
Warping or beaming machines	34	5th Jan. 1863	John Howard. John Bullough.
Winding, warping, beaming or dressing machines	81	9th Jan. 1863	William Harrison Moreland. John Chappell.
Preparing cotton for the operations of spinning and weaving.	302	3rd Feb. 1863	George Holcroft.
Construction of creels for warping machines and other machines to which creels are applied.	398	14th Feb. 1863	Rowland Baguley.
Certain improvements in machinery or apparatus for warping or beaming yarns or threads	452	19th Feb. 1863	Thomas Markland. John Charles Dickinson.
Improvements in warp dressing and in apparatus connected therewith. (*Communicated by Peter Garvie.*)	601	3rd March 1863	James Pollard.
Back beam warping machine	673	11th March 1863	William Rossetter.
Certain improvements in looms for weaving (*Communicated by Alexander Frey.*)	680	13th March 1863	Henry Bernoulli Barlow.
Certain improvements in machinery for reeling, winding, warping and beaming yarn.	725	18th March 1863	William Edward Taylor.
Improved compounds or compositions for sizing, stiffening and coloring yarns and textile fabrics.	893	9th April 1863	David James Cooke.
Improvements in the action and arrangement of machines for winding cops, in the construction and arrangement of banks for holding cops for warping purposes, in the formation of shuttles for receiving cops, and for apparatus for packing and securing cops in shuttles, one part of which improvements, consisting of a spring clutch, is applicable to machines in general.	937	14th April 1863	John Combe. John Henry Smalpage.
Balling motions (*Balling warps.*)	1061	28th April 1863	Samuel Crabtree.
Machinery for preparing, dressing and winding cotton, woollen, flax, silk and other warps. (*Communicated by Pierre François Dacheux and Gustave Lefebvre.*)	1197	12th May 1863	Richard Archibald Brooman.
Machinery for weaving, sizing, dressing and dyeing	1201	13th May 1863	Thomas Parkinson. Francis Taylor.
An improved combination of materials to be employed for the purposes of sizeing and stiffening.	1467	12th June 1863	Joseph Place.
Sizeing or preparing warps	1563	22nd June 1863	Alexander Twaddell.
Improvements in twisting machines particularly applicable to the manufacture of strings, strands, ropes or cables. (*And for warping.*)	1601	25th June 1863	Jules Ouarnier Mathieu.
Sizeing or gumming warp and weft threads (*Communicated by Stanislas Vigoureux.*)	1750	13th July 1863	Richard Archibald Brooman.
Machinery for winding, measuring and sizing silk (*See* "SIFTING.") (*Communicated by Emile Duseigneur.*)	1801	17th July 1863	Richard Coenen.
Machinery or apparatus for sizing and drying yarns and fabrics	1810	20th July 1863	Robert Benjamin Brassey. James Hargreaves.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WEAVING, &c.—*continued.*			
Improvements in making all woven and thready fabrics waterproof, and in finishing or surfacing fabrics generally. *Warps and weft.* (*Communicated by Etienne Guillaume.*)	1836	22nd July 1863	Charles Beslay.
Improvements in sizing and finishing fabrics, and in the machinery or apparatus employed therein.	1861	27th July 1863	John Wellington Welch.
Improvements in sizeing or dressing and in drying fibrous materials or fabrics, and in apparatus therefor.	3137	12th Dec. 1863	Joseph Townsend.
Apparatus for forcing size or other glutinous substances through pipes to supply machines for sizing yarns, cloths or other materials.	3225	21st Dec. 1863	James Eastwood.
II.—Weaving Plain, Figured and Double Fabrics; Jacquards and Looms; Woven Fabrics.			
Looms for weaving	16	2nd Jan. 1863	Abraham Bamford. Richard Blomley. Robert Taylor. James Lett.
Looms for weaving	43	6th Jan. 1863	James Eckersley.
An improved mode of perching and dressing textile fabrics during the process of weaving (*See* "FINISHING.")	55	7th Jan. 1863	William Crabtree. James Crowther.
Means or apparatus employed in spinning and weaving.	139	15th Jan. 1863	John Wright Child.
Certain improvements in power looms for weaving	149	17th Jan. 1863	William Shorrock.
Looms for weaving textile fabrics (*Communicated by Andrew Naudain, James Peacock and William Henry Walton.*)	173	20th Jan. 1863	William Clark.
Certain improvements in jacquard machines (*Communicated by Hercules Erba.*)	182	21st Jan. 1863	Henry Bernoulli Barlow.
Certain improvements in looms for weaving	194	22nd Jan. 1863	William Harrison. Benjamin Crossdale.
Looms for weaving	218	24th Jan. 1863	Ellis Shackleton.
Looms and apparatus for weaving	239	27th Jan. 1863	Joseph Edmondson. Thomas Ingram.
Certain improvements in looms for weaving	284	31st Jan. 1863	Mark Smith.
Looms for weaving	294	2nd Feb. 1863	John Gibson.
Improvements in weaving and in apparatus therefor	375	11th Feb. 1863	William Symington.
Certain improvements in looms for weaving	444	18th Feb. 1863	Francis Johnston. Robert Heatley.
Certain improvements in weaving and in the machinery employed therein. (*Communicated by Edme Hippolyte Junot.*)	459	20th Feb. 1863	Henry Bernoulli Barlow.
Looms for weaving	463	20th Feb. 1863	John Bentley. Hugh Booth.
Looms for weaving	530	25th Feb. 1863	William Hudson. Christopher Catlow.
A new application and combination of materials to be employed in the manufacture of "skirtings."	566	28th Feb. 1863	Thomas Farra.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WEAVING, &c.—*continued.*			
Improvements in cloth blankets and other fabrics to be used in machinery for printing fabrics, paper hangings, and letter press. (*Communicated by Achille Clément.*)	578	2nd March 1863	Frederick Tolhausen.
Certain improvements in looms for weaving (*Communicated by Alexander Frey.*)	680	13th March 1863	Henry Bernoulli Barlow.
Looms for weaving	721	18th March 1863	William Donbavand. David Crichton.
Certain improvements in looms weaving	726	18th March 1863	Henry Kilshaw.
Looms for weaving	757	21st March 1863	Edmund Hartley. John Clegg. Thomas Mellodew. James Mellodew.
Looms for weaving	828	31st March 1863	William Forrest. Hindle Duckworth.
Looms for weaving	835	1st April 1863	James Hindle. William Fielding Calvert. Emanuel Thornton.
Looms for weaving figured fabrics	922	11th April 1863	Alexander Fortay Maclure.
An improved construction of shuttle driver and apparatus for working the same.	961	16th April 1863	Thomas Alfred William Clarke.
Certain improvements in looms for weaving	965	17th April 1863	James Richmond. Thomas Richmond. Daniel Harling.
Looms for weaving	1005	22nd April 1863	James Lee. Edwin Dawson.
Looms for weaving	1056	27th April 1863	William Hudson. Christopher Catlow.
Certain improvements in power looms for weaving	1127	6th May 1863	Thomas Sagar. John Wilkinson.
Construction of mechanism applicable to looms and partly to carding-engines and other machinery.	1141	7th May 1863	John Walker.
Looms for weaving	1152	8th May 1863	John Smalley Grimshaw.
Certain improvements in power looms for weaving	1179	11th May 1863	Christopher Shorrock. William Shorrock.
Looms for weaving	1192	12th May 1863	William Whiteley.
Machinery for weaving, sizing, dressing and dyeing	1201	13th May 1863	Thomas Parkinson. Francis Taylor.
Looms for weaving	1265	20th May 1863	Robert Raynsford Jackson. William Pemberton.
Certain improvements in looms for weaving	1270	21st May 1863	William Walker.
Jacquard looms	1321	26th May 1863	Abraham Haley.
Looms for weaving	1330	27th May 1863	Arthur Bastow.
Jacquard machines used for weaving ornamental fabrics.	1381	2nd June 1863	Robert Crawford.
Jacquard machines (*Communicated by Edouard Maximilien Augustin Rigo and Charles Grognet.*)	1400	5th June 1863	Robert William Sievier.
Looms for weaving	1579	23rd June 1863	Samuel Robinson. Joseph Priestley. Jeremiah Foulds.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WEAVING, &c.—*continued.*			
Looms for weaving	1616	27th June 1863	William Bradshaw. James Bradshaw.
Looms for weaving	1644	1st July 1863	James Cole. James Cole, junior.
Certain improvements in jacquard looms	1663	4th July 1863	John McDonald.
Improvements in and connected with battens for driving shuttles from side to side of their work in weaving.	1757	14th July 1863	John Thomas Cooke.
Manufacture of umbrellas and parasols	1826	21st July 1863	James Engleburtt Vanner.
Improved mechanism for forming imitation selvages or longitudinal cords in weaving.	1858	25th July 1863	John Boyd.
Manufacture of umbrellas and parasols	1867	27th July 1863	Joseph Pain.
Certain improvements in looms for weaving	1892	31st July 1863	William Graham. John Graham.
Certain improvements in looms for weaving	1906	1st Aug. 1863	Josiah Kirk.
Means or apparatus for actuating rotary shuttle boxes.	1977	11th Aug. 1863	David Wright Barker.
Looms for weaving	1994	12th Aug. 1863	William Hudson. Christopher Catlow. John Dodgeon.
Looms for weaving	2032	15th Aug. 1863	Roger Lightbown.
Means or apparatus employed in weaving	2044	18th Aug. 1863	James Broadley.
Apparatus for feeding weft in hair cloth looms (*Communicated by Charles Bradley.*)	2061	19th Aug. 1863	George Tomlinson Bousfield.
Measuring apparatus for looms	2123	28th Aug. 1863	Robert Bell.
Looms for weaving	2138	29th Aug. 1863	David Speirs. Alexander Boyd. James Kirkwood.
Certain improvements in looms for weaving	2157	1st Sept. 1863	Christopher Shorrock. William Shorrock.
Looms for weaving	2243	11th Sept. 1863	James Denby Lee. James Crabtree.
An improved mixed fabric and in the application thereof to covering umbrellas and parasols.	2273	16th Sept. 1863	Robert Thomson.
Certain improvements in looms for weaving	2274	16th Sept. 1863	Edward Scott. John Starkey.
Power looms for weaving hair cloth and fabrics in which the weft is inserted in separate lengths of material. (*Communicated by Charles Bradley.*)	2328	21st Sept. 1863	George Tomlinson Bousfield.
Looms for weaving	2345	23rd Sept. 1863	Walter Gibb. James Holland.
A new application of material for covering crinolines, and in the manufacture of the said material. (*Waste domestic.*)	2369	26th Sept. 1863	Richard Clarke.
An improved fabric for the production of permanent electricity, applicable for wearing apparel. (*Communicated by Théodore Courant.*)	2370	26th Sept. 1863	William Clark.
Improvements in the manufacture of woven fabrics applicable to covering telegraph wires.	2387	29th Sept. 1863	Sam Mendel.
Looms for weaving	2423	3rd Oct. 1863	Joseph Schofield. John Kirk. William Spivey.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WEAVING, &c.—*continued.*			
Improvements in machinery for rolling, shaping or forging metals, and in apparatus for grinding and polishing the same. (*Polishing loom rods.*)	2506	13th Oct. 1863	James Dodge.
Looms for weaving - - - -	2519	14th Oct. 1863	James Milton.
Certain improvements in looms for weaving -	2538	17th Oct. 1863	Samuel Berrisford. William Ainsworth.
Certain improvements in looms for weaving -	2540	17th Oct. 1863	William Hampson the younger.
Looms for weaving - - - -	2610	22nd Oct. 1863	Archibald Turner.
Means or apparatus employed in weaving - -	2654	27th Oct. 1863	John Hutchinson. James Hollingworth.
Looms for weaving - - - -	2691	30th Oct. 1863	Archibald Turner.
Certain improvements in looms for weaving - (*Communicated by Wilhelm Gminder.*)	2766	7th Nov. 1863	Thomas Critchley Barraclough.
Improvements in the manufacture of neckties, cravats and waistbands, which improvements are also applicable to other articles of wearing apparel.	2813	12th Nov. 1863	Benjamin Peake.
Looms for weaving - - - -	2834	13th Nov. 1863	John Wallace Drummond.
Looms for weaving - - - -	2838	14th Nov. 1863	Matthew Andrew Muir. James M'Ilwham.
Jacquard machines - - - - (*Communicated by Edouard Maximilien Augustin Rigo and Charles Grognet.*)	2885	18th Nov. 1863	Robert William Sievier.
Manufacture of sacks, bags and garments without seam.	2937	21st Nov. 1863	Antoine Simoneton.
The production of thread, cordage and woven textile fabrics from prepared fibre of hemp or any of the plants known of the order or genus "Cannabis," and in mixing such prepared fibre with cotton, silk or animal wool - -	2950	24th Nov. 1863	St. George Gregg. Thomas Gray.
Certain improvements in looms for weaving - (*Communicated by Messieurs Auguste Vidal and Sons and Messieurs Blaquière Brothers.*)	2969	26th Nov. 1863	Henry Bernoulli Barlow.
Looms for weaving elastic fabrics - - -	2984	27th Nov. 1863	James Clark.
Looms for weaving elastic fabrics - - -	2986	27th Nov. 1863	Edward Gardner.
Looms for weaving - - - -	3058	5th Dec. 1863	George Wilson.
Looms for weaving - - - -	3090	8th Dec. 1863	Robert Harrowby. Jeremiah Foulds. Alfred Harrowby.
Looms for weaving - - - -	3120	11th Dec. 1863	James Bullough.
Looms for weaving - - - -	3175	16th Dec. 1863	James Hindle. William Fielding Calvert. Emanuel Thornton.
Looms for weaving - - - -	3203	19th Dec. 1863	Thomas Goldie.
Looms for weaving - - - -	3241	22nd Dec. 1863	Archibald Turner.
Looms for weaving - - - -	3255	23rd Dec. 1863	William Holland.
Looms - - - - -	3291	29th Dec. 1863	David Naylor.
Certain improvements in looms for weaving -	3304	31st Dec. 1863	John Starkey. John Haworth. James Kay Phippen.
Manufacture of ornamental fabrics - -	3305	31st Dec. 1863	Robert Bell.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WEAVING, &c.—*continued.*			
III.—Weaving Carpets, Velvets and other Pile and Terry Fabrics; Carpet Looms.			
Producing designs upon velvets, cloth, furniture hangings and similar materials. (*Communicated by Alphonse Eymin and Jean Marie Tourres.*)	17	2nd Jan. 1863	Edward Thomas Hughes.
Looms for weaving - - - -	43	6th Jan. 1863	James Eckersley.
Looms for weaving figured fabrics - - (*Carpets.*)	178	21st Jan. 1863	Andrew Phillips.
Ornamenting plush and other such textile fabrics (*See* "PRINTING.")	493	23rd Feb. 1863	Thomas Dickins. Albert Lungley Dickins. Harvey Heywood.
Machinery or apparatus for the manufacture of carpets and other piled fabrics.	593	3rd March 1863	John Henderson.
Improvements in weaving piled and other fabrics, and in the machinery or apparatus connected therewith.	1686	7th July 1863	John Orr.
Looms for weaving carpets - - -	1787	16th July 1863	John Lamb. Samuel Tovey.
An improved fabric and improvements in looms for manufacturing the same.	2160	1st Sept. 1863	Pierre Joyot, jeune.
Improvements in printing on certain and other terry and velvet pile carpets, felted cloths and other fabrics and materials, and in the processes and apparatus connected therewith.	2207	8th Sept. 1863	Joseph Burch.
Improvements in looms for weaving terry and cut pile fabrics, parts of which improvements are also applicable to other kinds of looms - -	2689	30th Oct. 1863	Archibald Turner. William Edward Newton.
Certain improvements in the manufacture or weaving of piled fabrics.	3306	31st Dec. 1863	Joseph Clegg.
IV.—Knitting; Lace Making; Stocking Frames; Warp Fabrics; Nets and Meshed Fabrics.			
Manufacture of lace in twist lace machines - -	112	13th Jan. 1863	Thomas Butler.
Manufacture of bobbin net made on bobbin net or twist lace machines.	118	14th Jan. 1863	John Sanderson Butler.
Looms or machinery for the manufacture of lace and other fabrics. (*Communicated by Louis Planche, Gustave Lafond, Désiré Sival called Laserve and Leon Sival called Laserve.*)	143	15th Jan. 1863	Richard Archibald Brooman.
Machinery employed in the manufacture of looped fabrics - - - - - -	268	29th Jan. 1863	William Ball. John Wilkins.
Arrangement or fixing of combs in machines employed in the manufacture of bobbin net or twist lace.	553	27th Feb. 1863	James Carver.
Manufacture of stockings and other looped fabrics made in knitting-machines.	585	2nd March 1863	John Scott Wells.
Apparatus for winding and measuring lace - -	595	3rd March 1863	John Sibert.
Means or apparatus for the manufacture of looped fabrics - - - -	623	5th March 1863	Samuel Hall Foster. Thomas Bunney. James Anderson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WEAVING, &c.—*continued.*			
Improved apparatus for the winding of lace on to the work roller in warp lace, bobbin net or twist lace machines.	629	5th March 1863	Joseph Elsey.
Construction of jacquards employed in bobbin net or twist lace machines.	729	18th March 1863	Thomas Oldknow.
Improvements in the manufacture of ornamental twist lace and in machinery used therein - -	773	24th March 1863	Alfred Topham. Joseph Topham. Jabez Topham.
Manufacture of carriages employed in machines for the making of lace or other fabrics.	820	30th March 1863	James Carver.
Machinery or apparatus employed in the manufacture of looped fabrics - - - - -	996	21st April 1863	William Campion. George Wilson.
Machinery or apparatus for the manufacture of looped fabrics.	1236	16th May 1863	William White.
Carriages used in machines employed in the manufacture of lace or other fabrics - - -	1361	30th May 1863	Stephen Bates. John Jardine.
Improvements in the production of fabrics by lace machinery, and in means or apparatus employed therein.	1518	17th June 1863	William Crofts.
Manufacture of ornamental lace - - -	1724	10th July 1863	William Clarke.
A new machine for clipping off connecting threads in the manufacture of lace.	1737	11th July 1863	John Barnes.
Improvements in machine knitting needles and in machinery or apparatus for making the same. (*Communicated by Thomas Sands.*)	1802	17th July 1863	John Henry Johnson.
Manufacture of fabrics in twist lace machinery -	1822	21st July 1863	William Clarke.
Means or apparatus for facilitating the catching of fish.	1871	28th July 1863	Alexander Hector.
Improvements in the manufacture of looped fabrics and in machinery or apparatus employed therein.	1901	1st Aug. 1863	William Cotton.
Apparatus used for producing looped fabrics - -	1962	8th Aug. 1863	John Thornton. James Thornton. Albert Thornton. William Thornton.
Improvements in the manufacture of lace and in means or apparatus employed therein - -	2236	11th Sept. 1863	James Hartshorn. William Redgate.
Manufacture of stockings and drawers - -	2536	16th Oct. 1863	Samuel Jay.
Machinery or apparatus for the manufacture of looped or knitted fabrics.	2778	7th Nov. 1863	Moses Mellor.
Machinery for making looped fabrics - -	2891	18th Nov. 1863	James Mackew.
V.—Weaving Fringes, Ribbons, &c., Producing Braid; Platting.			
Looms used in weaving narrow fabrics - -	121	14th Jan. 1863	Benjamin Burrows.
Improvements in machinery for plaiting cotton thread or other fibrous material over steels for crinolines, and in the mode of securing the platting to prevent it slipping thereon.	161	19th Jan. 1863	Henry Rushton.
Looms for weaving ribbons - - - (*Communicated by Antoine Comte.*)	224	24th Jan. 1863	Frederick Tolhausen.
Improvements in the manufacture of braid and in machinery or apparatus employed therein. (*Communicated by Thomas James Sloan.*)	257	28th Jan. 1863	John Henry Johnson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WEAVING, &c.—*continued*			
Looms for weaving ribbons, elastic webbing and other narrow fabrics.	301	3rd Feb. 1863	Thomas Raworth.
Machinery or apparatus for doubling or twisting yarn, thread, braid, rope or similar articles. (*Communicated by Jean Marie Daillon.*)	552	27th Feb. 1863	Edward Thomas Hughes.
Improvements in and applicable to platting or braiding machines.	827	31st March 1863	Richard Furnival.
Means of actuating shuttles in looms for weaving narrow fabrics.	861	4th April 1863	Josiah Gimson.
Certain improvements in the manufacture of "elastic webbing."	1275	21st May 1863	Nathaniel Jones Amies.
An improved binding to be used for trimming woollen cloth garments.	1312	25th May 1863	Gustav Köttgen.
Looms for weaving narrow fabrics - -	1664	4th July 1863	Robert Flude. John Farndon.
Improvements in shuttles for weaving narrow fabrics and in mounting and fitting them to the battens.	1665	4th July 1863	Josiah Gimson.
Improvements in weaving "chenille" and in the machinery or apparatus connected therewith -	1736	11th July 1863	John Orr. John Brinton. John Lewis.
An improved fabric and improvements in looms for manufacturing the same.	2160	1st Sept. 1863	Pierre Joyot.
Improvements in the manufacture of chenille and in the machinery or apparatus employed therein. (*Communicated by Louis Bernardin.*)	2220	9th Sept. 1863	Edward Thomas Hughes.
Certain improvements in braiding-machines -	2239	11th Sept. 1863	Thomas James Sloan.
An improved apparatus for making fringes -	2736	5th Nov. 1863	Jonathan Northrop.
Braiding-machines - - - -	2942	23rd Nov. 1863	William Bestwick.
Braiding-machines - - - - -	2957	24th Nov. 1863	Richard Furnival.
VI.—Shuttles.			
Means or apparatus employed in spinning and weaving.	139	15th Jan. 1863	John Wright Child.
Improvements in the action and arrangement of machines for winding cops, in the construction and arrangement of banks for holding cops for warping purposes, in the formation of shuttles for receiving cops, and for apparatus for packing and securing cops in shuttles, one part of which improvements consisting of a spring clutch is applicable to machines in general.	937	14th April 1863	John Combe. John Henry Smalpage.
Improvements in shuttles for weaving narrow fabrics and in mounting and fitting them to the battens.	1665	4th July 1863	Josiah Gimson.
An improvement in the manufacture of shuttles - (*Communicated by Paul Morin.*)	1951	7th Aug. 1863	Alfred Vincent Newton.
Shuttles for weaving - - - -	2816	12th Nov. 1863	Hugh Holden.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WEAVING, &c.—*continued.*			
VII.—Temples, Pickers, Healds and Reeds.			
Certain improvements in weaving and in the machinery employed therein. (*Harness.*) (*Communicated by Edme Hippolyte Junot.*)	459	20th Feb. 1863	Henry Bernoulli Barlow.
Improvements in pickers and in the means or apparatus employed in the manufacture thereof.	870	6th April 1863	John Burwin.
Improved healds for weaving	992	21st April 1863	Hudson Yeadon. Edwin Yeadon. Samuel Yeadon. John Yeadon.
Looms for weaving	1005	22nd April 1863	James Lee. Edwin Dawson.
Looms for weaving (*Picker.*)	1616	27th June 1863	William Bradshaw. James Bradshaw.
Temples for looms	1708	9th July 1863	Richard Phillipson. William Bond.
Power looms for weaving hair cloth and fabrics in which the weft is inserted in separate lengths of material. (*Communicated by Charles Bradley.*)	2328	21st Sept. 1863	George Tomlinson Bousfield.
Pickers for looms	2358	24th Sept. 1863	William Oxley.
Manufacture of pickers used in weaving	2443	6th Oct. 1863	William Holgate. Henry Holgate. Thomas Holgate.
Machinery or apparatus for punching, shearing and burnishing (*Metallic healds.*)	2595	22nd Oct. 1863	John Craven. Samson Fox.
VIII.—Letting-off and Taking-up Motion; Stopping Looms.			
Looms for weaving	43	6th Jan. 1863	James Eckersley.
Certain improvements in power looms for weaving	149	17th Jan. 1863	William Shorrock.
Looms for weaving (*Stopping.*)	218	24th Jan. 1863	Ellis Shackleton.
Improvements in the manufacture of braid and in machinery or apparatus employed therein. (*Stop mechanism.*) (*Communicated by Thomas James Sloan.*)	257	28th Jan. 1863	John Henry Johnson.
Certain improvements in looms for weaving (*Taking up; stop motion.*)	284	31st Jan. 1863	Mark Smith.
Looms for weaving (*Taking up motion.*)	463	20th Feb. 1863	John Bentley. Hugh Booth.
Looms for weaving	530	25th Feb. 1863	William Hudson. Christopher Catlow.
Apparatus for winding and measuring lace	595	3rd March 1863	John Sibert.
Improved apparatus for the winding of lace on to the work roller in warp lace, bobbin net or twist lace machines.	629	5th March 1863	Joseph Elsey.
Certain improvements in looms for weaving (*Giving off and taking up.*) (*Communicated by Alexander Frey.*)	680	13th March 1863	Henry Bernoulli Barlow.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WEAVING, &c.—*continued.*			
Looms for weaving	721	18th March 1863	William Donbavand. David Crichton.
Looms for weaving figured fabrics	922	11th April 1863	Alexander Fortay Maclure.
Certain improvements in looms for weaving	965	17th April 1863	James Richmond. Thomas Richmond. Daniel Harling.
Looms for weaving	1056	27th April 1863	William Hudson. Christopher Catlow.
Construction of mechanism applicable to looms and partly to carding-engines and other machinery. (*Taking up roller.*)	1141	7th May 1863	John Walker.
Certain improvements in power looms for weaving (*Break.*)	1179	11th May 1863	Christopher Shorrock. William Shorrock.
Machinery for weaving, sizing, dressing and dyeing (*Letting off motion.*)	1201	13th May 1863	Thomas Parkinson. Francis Taylor.
Certain improvements in looms for weaving	1270	21st May 1863	William Walker.
Looms for weaving	1994	12th Aug. 1863	William Hudson. Christopher Catlow. John Dodgeon.
Certain improvements in looms for weaving	2157	1st Sept. 1863	Christopher Shorrock. William Shorrock.
Certain improvements in braiding machines (*Stopping the mechanism.*)	2239	11th Sept. 1863	Thomas James Sloan.
Certain improvements in looms for weaving	2274	16th Sept. 1863	Edward Scott. John Starkey.
Power looms for weaving hair cloth and fabrics in which the weft is inserted in separate lengths of material. (*Communicated by Charles Bradley.*)	2328	21st Sept. 1863	George Tomlinson Bousfield.
Certain improvements in looms for weaving	2538	17th Oct. 1863	Samuel Berrisford. William Ainsworth.
An improved lett-off motion for looms (*Communicated by Silas Shepard.*)	2545	17th Oct. 1863	Lewis Reese Chesbrough.
Looms for weaving	2834	13th Nov. 1863	John Wallace Drummond.
Looms for weaving elastic fabrics	2984	27th Nov. 1863	James Clark.
Looms for weaving (*Stopping.*)	3120	11th Dec. 1863	James Bullough.
Looms for weaving	3203	19th Dec. 1863	Thomas Goldie.
Certain improvements in looms for weaving	3304	31st Dec. 1863	John Starkey. John Haworth. James Kay Phippen.
WEIGHING-MACHINES, SCALES, INDICATING WEIGHT.			
Improvements in the manufacture and treatment of malleable iron and steel, and in furnaces, machinery and apparatus employed in such manufacture. (*Ascertaining weight of metal in ladle.*)	114	13th Jan. 1863	Henry Bessemer.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WEIGHING-MACHINES, &c.—*continued.*			
Improvements in spinning, doubling, throwing and reeling silk, and in the machinery employed therein. (*Ascertaining the weight.*)	549	27th Feb. 1863	John Houghton Albinson. Henry Hooton Cocker.
Improvements in apparatus for winding, cleaning, measuring, sorting, doubling, throwing and reeling silk, parts of which improvements are also applicable to like machinery for spinning, doubling and twisting cotton, wool and other fibrous materials.	674	12th March 1863	Frederick Buser-Kraushaar.
Construction of weighing apparatus - - - (*For letters and papers.*)	791	26th March 1863	Nathaniel Richard Hall.
A translucid cylindric apparatus for bringing the former weights and measures into those of the present decimal system most easily and precisely, and vice versâ.	826	31st March 1863	Amedée Barthelemi Donat Maurand.
Certain improvements in apparatus for weighing solid bodies and for measuring fluids, parts of which improvements are also applicable to the opening and closing of "dampers."	1076	29th April 1863	Ellis Rowland.
Carts, waggons and other vehicles - -	1106	2nd May 1863	Jean Baptiste Dubreuil.
Spring balances and pressure guages - -	1114	4th May 1863	Frank Applegate.
Machinery for weighing grain - - -	1216	14th May 1863	Lewis Scudder Chichester.
Looms for weaving carpets - - - - (*Form of yarn weight.*)	1787	16th July 1863	John Lamb. Samuel Tovey.
Spring balances where spiral springs are used -	2186	4th Sept. 1863	Thomas Fisher.
Apparatus for ascertaining the weight of the load supported by the springs of railway locomotives and carriages, for the purpose of regulating or equalizing such load. (*Communicated by Ludwig Starck.*)	2537	17th Oct. 1863	Moritz Meisel.
Balances or weighing-machines - - - (*Communicated by Major-General William Rosecrans and Doctor Anson Platt.*)	2585	21st Oct. 1863	George Haseltine.
An improved salinometer which is applicable also as a hydro-meter, and for other similar or analogous purposes. (*Testing weights.*)	2655	27th Oct. 1863	Patrick Benignus O'Neill.
Certain improvements in apparatus for weighing solid bodies and for measuring fluids, parts of which improvements are also applicable to the opening and closing of dampers.	2818	12th Nov. 1863	Ellis Rowland.
Improvements in the manufacture of door springs, part of which said improvements are applicable to the manufacture of weighing machines, steelyards, scale-beams and other articles of like nature - - - - - -	2996	30th Nov. 1863	George Apdail Thompson the elder. George Apdail Thompson the younger. John Latham.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WHEELS FOR CARRIAGES, RAILWAY WHEELS; WHEEL TIRE, &c.			
Reaping and mowing machines - - - (*Partly communicated by Walter Abbott Wood.*)	598	3rd March 1863	David Ball Parsons.
Improvements in manufacturing curvated armour plates and other iron work, and in machinery or apparatus employed therein. (*Tyre for railway wheels.*)	614	4th March 1863	William Littell Tizard.
An improved construction of elastic carriage wheel (*Communicated by Seth Woodbury.*)	643	6th March 1863	Alfred Vincent Newton.
Machinery for shaping wood - - - (*Spokes.*)	666	11th March 1863	Henry Wilson.
An improvement or improvements in moulds to be used for casting steel or homogeneous iron. (*Wheel tyres.*)	818	30th March 1863	Robert Mushet.
Improvements in wheels and axles applicable to locomotives, carriages and paddle wheels.	975	18th April 1863	William Benoni Burden.
Treating worn-out railway tyres - - -	1191	12th May 1863	James Edward M^cConnell. George Hinton Bovill.
Improvements in velocipedes and in the construction of wheels for the same and other carriages.	1280	21st May 1863	Joseph Goodman.
Improvements in the manufacture of the tyres for railway wheels, and in the means of securing the tyres to the wheels.	1326	26th May 1863	Frederick William Kitson. James Kitson the younger.
Implements to be used in the cultivation of the soil.	1404	5th June 1863	Joseph Seaman.
Improved apparatus for placing tyres on wheels, or hooping or ferruling generally while the metal is hot. (*Communicated by Charles Imhoff.*)	1611	26th June 1863	William Edward Gedge.
Improvements in couplings for hose pipes, and also in connecting axles to the naves or bosses of wheels. (*Communicated by Edmund Blodget Jucket.*)	1617	27th June 1863	Edward Thomas Hughes.
Improvements in ordnance and fire-arms, and in projectiles to be used therewith. (*Wheels for gun carriages.*)	1628	30th June 1863	Alexander Keene Richards.
Wheels and their tires, axles and axle-boxes -	1674	6th July 1863	William Bridges Adams.
Machinery for rolling hoops and tyres - -	1832	22nd July 1863	Peter Rothwell Jackson,
Improvements in axles and axle-boxes and the parts of wheels immediately connected therewith.	2018	14th Aug. 1863	William Asbury.
Hydraulic apparatus - - - - (*For keying up and dismounting wheels from shafts.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
The construction of rail and road carriages and improved wheel tires, and an improvement in railway crossings adapting them to such carriages.	2320	21st Sept. 1863	William Elsdon.
Improvements in furnaces for heating wheel hoops, applicable also for other similar purposes.	2355	24th Sept. 1863	Amos Firth.
Improvements in the manufacture of hoops and tires for railway wheels and other purposes, and in the machinery employed therein.	2493	12th Oct. 1863	Peter Rothwell Jackson.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WHEELS, &c.—*continued.*			
An improved mode of manufacturing railway wheels (*Communicated by James Millholland.*)	2621	23rd Oct. 1863	Alfred Vincent Newton.
Wheels, tires, axles and axle-boxes, and modes of applying them.	2896	19th Nov. 1863	William Bridges Adams.
Improvements in the construction of carriages and vehicles, and of wheels applicable thereto.	2994	30th Nov. 1863	André Etienne.
Locomotive engines and trains for railways, tramways and common roads.	3195	18th Dec. 1863	William Bridges Adams.
WHEELS FOR MACHINERY; COG-WHEELS, PULLEYS, CAMS, &c.			
Improvements applicable to spur wheels, racks and other toothed gear, to insure greater strength in the teeth.	197	22nd Jan. 1863	John Ellacott.
Lawn-mowing machines - - - -	381	12th Feb. 1863	Alexander Morton.
Improvements in lever horse power machines, the cog gearing employed being applicable to other machines. (*Communicated by Cyrus Avery.*)	397	14th Feb. 1863	George Haseltine.
Improvements in wheels and axles applicable to locomotives, carriages, and paddle wheels.	975	18th April 1863	William Benoni Burden.
Machinery for spinning and doubling - -	1013	23rd April 1863	Peter M'Gregor.
Pulleys, capstans and other machines for raising weights and transmitting motive-power - -	1032	25th April 1863	Thomas Aldridge Weston. Charles Vivian.
Improvements in the manufacture of and in the machinery and appliances for holding, drilling, turning, tapping, fitting and shaping certain parts of steam, water, gas and lamp fittings. (*Making pulley wheels.*)	1041	25th April 1863	John Thomas Stroud.
Machinery for cutting the teeth of bevelled wheels -	1172	9th May 1863	James Burrell.
Machinery for rolling, grinding and cutting files and rasps. (*Worm wheel.*) (*Communicated by William Picket Pierce.*)	1218	14th May 1863	George Tomlinson Bousfield.
An improvement or improvements in the manufacture of spur wheels used in the construction of mill and forge gearing and for other like purposes.	1386	3rd June 1863	Thomas Claridge.
Improvements in lever horse power machines, the cog gearing employed being applicable to other machines. (*Communicated by Cyrus Avery.*)	1701	8th July 1863	George Haseltine.
Hydraulic apparatus - - - - (*For keying up and dismounting wheels from shafts.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
An improvement in the manufacture of cast steel tyres. (*Communicated by Jacob Mayer.*)	2317	19th Sept. 1863	Thomas Edward Vickers.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WHEELS, &c.—*continued.*			
Improvements in lubricating the shafts of the conducting pulleys of mules, which improvements are also applicable to machinery in general.	3028	2nd Dec. 1863	Thomas Thornber England.
Driving-bands and pulleys for transmitting motion	3098	8th Dec. 1863	Ebenezer Noah Gregory.
Improvements in machinery or apparatus for rolling roads, which is also applicable to traction engines and other similar purposes - -	3216	21st Dec. 1863	William Clark. William Fothergill Batho.
Lathes for turning - - - - (*Wharfs for spinning machinery.*)	3254	23rd Dec. 1863	Samuel Bradley Ardrey. Samuel Beckett. Walton Smith.
Cotton gins - - - - (*Saw tooth.*) (*Communicated by Israel Fanning Brown.*)	3283	29th Dec. 1863	Theodore Bourne.
WINDING, REELING AND BALLING YARN AND THREAD.			
Winding, warping, beaming or dressing machines -	81	9th Jan. 1863	William Harrison Moreland. John Chappell.
Winding or copping frames - - - (*Communicated by Jean Jacques Bourcart.*)	95	12th Jan. 1863	William Clark.
Improvements in the preparation or manufacture of textile materials, and in the machinery or apparatus used therein. (*Winding.*)	207	23rd Jan. 1863	Alexander Henderson
Improvements in spinning, doubling, throwing and reeling silk, and in the machinery employed therein - - - -	549	27th Feb. 1863	John Houghton Albinson. Henry Hooton Cocker.
Apparatus for winding and measuring lace -	595	3rd March 1863	John Sibert.
Improved apparatus for the winding of lace on to the work roller in warp lace, bobbin net or twist lace machines. (*See* "WEAVING.")	629	5th March 1863	Joseph Elsey.
An improved apparatus for reeling silk direct from cocoons, on bobbins.	654	9th March 1863	Sir Albert Keller.
Improvements in apparatus for winding, cleaning, measuring, sorting, doubling, throwing and reeling silk, parts of which improvements are also applicable to like machinery for spinning, doubling and twisting cotton, wool and other fibrous materials.	674	12th March 1863	Frederick Buser-Kraushaar.
Certain improvements in machinery for reeling, winding, warping and beaming yarn.	725	18th March 1863	William Edward Taylor.
Improvements in the manufacture of cords, ropes and cables, and in machinery employed therein, applicable also to spinning, winding and twisting fibrous and filamentous substances. (*Communicated by Jean Antoine de Maniquet.*)	785	25th March 1863	Richard Archibald Brooman.
Winding or copping frames - - - (*Communicated by Jean Jacques Bourcart.*)	805	27th March 1863	William Clark.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WINDING, &c.—*continued.*			
A new composition for dressing and preparing silk, cotton and woollen tissues and fibres, and also mixtures of the same. (*Facilitating winding.*) (*Communicated by Jacques Mathevon.*)	873	7th April 1863	Henry Gilbee.
Improvements in the action and arrangement of machines for winding cops, in the construction and arrangement of banks for holding cops for warping purposes, in the formation of shuttles for receiving cops, and for apparatus for packing and securing cops in shuttles, one part of which improvements consisting of a spring clutch is applicable to machines in general - -	937	14th April 1863	John Combe. John Henry Smalpage.
Balling motions - - - - -	1061	28th April 1863	Samuel Crabtree.
Machinery or apparatus for winding cotton, silk, wool or other threads, on spools or reels.	1087	30th April 1863	John Wibberley.
Machinery for preparing, dressing and winding cotton, woollen, flax, silk and other warps. (*See* "WEAVING.") (*Communicated by Pierre François Dackeux and Gustave Lefebvre.*)	1197	12th May 1863	Richard Archibald Brooman.
Certain improvements in machinery or apparatus for winding yarns or threads - - - -	1413	8th June 1863	William Coare Brocklehurst. Joseph Creighton. Charles Makinson. John Creighton.
Adapting tapes, ribbons and other such narrow fabrics or thread to surfaces from which they may be unwound or upon which they may be rewound.	1486	13th June 1863	Marcus Brown Westhead.
Improvements in twisting and winding silk, and in the machinery or apparatus to be employed therein.	1524	18th June 1863	John Alexander Sparling.
Winding-machines - - - -	1560	20th June 1863	James Booth the younger.
An invention having reference to bobbins and the winding of roving or yarn thereon.	1599	25th June 1863	Daniel Hussey.
Twisting machines particularly applicable to the manufacture of strings, strands, ropes or cables. (*And for winding or warping.*)	1601	25th June 1863	Jules Ouarnier Mathieu.
Machinery for winding, measuring and sizing silk - (*Communicated by Emile Duseigneur.*)	1801	17th July 1863	Richard Coenen.
Machinery or apparatus for cleaning cotton and wool from seeds, burrs or other such extraneous matters.	2070	20th Aug. 1863	John Platt. William Richardson.
Machinery or apparatus for winding narrow laps of wool.	2071	20th Aug. 1863	John Platt. William Richardson.
Machinery or apparatus for winding yarns or thread - - - - -	2233	10th Sept. 1863	Matthew Andrew Muir. James M'Ilwham.
Machinery or apparatus for winding yarns or threads.	2601	22nd Oct. 1863	Charles Parker.
Doubling and winding-machines - -	2656	27th Oct. 1863	Robert Smith.
Machinery for doubling, twisting and winding silk and other fibrous substances.	2810	12th Nov. 1863	Barnaby Angelo Murray.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WINDING, &c.—*continued.*			
Certain improvements in machinery or apparatus for winding yarns or threads - - -	2979	27th Nov. 1863	William Coare Brocklehurst. Joseph Creighton. John Creighton.
A holder or suspender for holding cotton and other reels, spools or balls, parts of which are also applicable for other useful purposes - -	3224	21st Dec. 1863	Edwin John Green. Richard Mason.
WINDOW BLINDS, SUN SHADES, FIRE-SCREENS.			
Window shutters and window blinds - -	814	28th March 1863	Griffith Thomas.
Improvements in the manufacture of certain descriptions of iron tubing, and in the means of producing and applying an ornamental case to the same, which said means are also applicable to the production of ornaments in metal for other purposes - - - - - (*Screens.*)	1300	23rd May 1863	Ferdinand Potts. John Key.
Improvements in the construction of the frames, sashes, shutters, blinds and ventilators for windows or other openings, part of which improvements are also applicable to other constructive purposes.	1315	25th May 1863	John Hilliar.
Improvements in umbrellas, parasols, sun shades, walking sticks and whips, and in brooches and other ornaments.	1452	11th June 1863	John Fancis Kain.
Improvements applicable to the ornamentation or decoration of articles of furniture, part of which improvements may also be applied to architectural ornamentation. (*And fire-screens.*)	1471	12th June 1863	Thomas Charles March.
Improvements in revolving shutters and blinds, and in apparatus for the manufacture of the same.	1803	18th July 1863	Alexander Clark.
An improved method of securing or tightening the cords of blind and other rollers.	1875	28th July 1863	William Thomas Smith.
Louvre shutters and venetian blinds - -	2384	28th Sept. 1863	Griffith Thomas.
Apparatus for regulating and working window blinds.	2449	7th Oct. 1863	David Barr.
Improvements in "Hansom" cabs, parts of which improvements are also applicable to other wheeled carriages. (*Blind.*)	2573	20th Oct. 1863	John William Nottingham.
Apparatus used when rolling blinds, maps and other articles on rollers. (*Communicated by Silas Safford Putnam and Harriet Luthera Packer.*)	2836	13th Nov. 1863	George Tomlinson Bousfield.
An improved roller for window blinds - -	3119	11th Dec. 1863	Susan Tuchet.
Improved apparatus for painting venetian blinds -	3172	16th Dec. 1863	John Miller Bryden.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WINDOWS AND SASHES; WINDOW-FRAMES AND SHUTTERS; GLAZING.			
Manufacture of elastic fabrics - - - (*Window springs.*)	4	1st Jan. 1863	Matthias Edward Bowra. Arthur Edward Francis.
A new and improved method for making sash frames and sashes, and suspending the same by atmospheric or gas pressure.	177	21st Jan. 1863	Joseph William Mecars.
Revolving shutters - - - - -	255	28th Jan. 1863	Samuel William Francis.
An improved spring catch or fastening applicable to windows and other useful purposes.	318	4th Feb. 1863	William Thomas Weston.
Improvements in the construction of window sashes, whereby the same are rendered more weather proof and secure against draughts and burglars, and permit the outside to be cleaned with the facility of the inside.	322	4th Feb. 1863	William Stokes.
Window furniture or fastenings - - - -	409	14th Feb. 1863	Alexander John Fraser.
Improvements in wrought iron casements and in the means for fastening the same, which improvements are also partly applicable to the framework of glass doors, conservatories and similar structures. (*Communicated by Louis Pierre, Vincent Etienne Eugene Jacquemin, Jean Charles Douriez and Gustav Joseph Legros.*)	413	14th Feb. 1863	John Henry Johnson.
Improvements in window frames and in glazing windows.	536	26th Feb. 1863	Henry Walter Brown.
Improvements in horticultural buildings and other glazed structures, part of which improvements is also applicable to ventilating other buildings.	624	5th March 1863	John Miller.
Window shutters and window blinds - -	814	28th March 1863	Griffith Thomas.
Metallic window shutters - - - - -	935	14th April 1863	George Thomas Smith.
Improvements in apparatus for manufacturing beton and artificial stone, pugging clay and other similar purposes, and in the production of artificial stone, and artistic, ornamental and decorative articles, works and surfaces. (*Jambs and styles of windows.*) (*Communicated by François Coignet.*)	1086	29th April 1863	Michael Henry.
Butt hinges - - - - - - (*For shutters.*) (*Communicated by William Henry Hayes.*)	1282	22nd May 1863	William Snell.
Improvements in the manufacture of certain descriptions of iron tubing, and in the means of producing and applying an ornamental case to the same, which said means are also applicable to the production of ornaments in metal for other purposes. (*Sash bars and frames.*)	1300	23rd May 1863	Ferdinand Potts. John Key.
Improvements in the construction of the frames, sashes, shutters, blinds and ventilators for windows or other openings, part of which improvements are also applicable to other constructive purposes.	1315	25th May 1863	John Hilliar.
An improved spring fastening - - - (*For window sashes.*)	1333	27th May 1863	Charles Gammon.
Apparatus applied to house and carriage window sashes for the working and fastening thereof.	1509	16th June 1863	Alexander John Fraser.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WINDOWS, &c.—*continued.*			
Improvements in stoppers and lids or covers for jars, bottles and other vessels, also in closing and fastening other articles. (*Fastening windows.*)	1625	30th June 1863	Josiah George Jennings Manuel Leopold Josias Lavater.
Construction of skylights and roof lights for railway stations, conservatories and other similar structures.	1714	9th July 1863	Robert Agate.
Improvements in revolving shutters and blinds, and in apparatus for the manufacture of the same.	1803	18th July 1863	Alexander Clark.
Apparatus for securing the safety of persons in window cleaning or otherwise working outside of windows.	1840	23rd July 1863	William Cole.
Window frames and sashes - - -	1879	29th July 1863	George Rickarby. Thomas Albert Barrett.
An improved method of fire-proof construction for buildings, by the use of arches formed of concrete. (*Dormer lights.*)	1998	13th Aug. 1863	Charles Colton Dennett.
Safely closing doors, windows and other apertures. (*Communicated by Leon Mariz and Jacques Fumet.*)	2002	18th Aug. 1863	Charles Tessier.
Bolts for fastening doors, windows, shutters and for other like purposes.	2173	3rd Sept. 1863	Charles Jackson.
Improvements in side lights for ships and other navigable vessels, and in the manufacture of the same.	2229	10th Sept. 1863	John Hays Wilson.
Louvre shutters and venetian blinds - -	2384	28th Sept. 1863	Griffith Thomas.
Lamps and stoves for the application of blast heat to horticultural, agricultural and other specified purposes. (*For plumbers.*)	2535	16th Oct. 1863	Frederick George Stuber.
Improvements in "Hansom cabs," parts of which improvements are also applicable to other wheeled carriages. (*Window.*)	2573	20th Oct. 1863	John William Nottingham.
Improvements in the manufacture of the prisms, lenses and glasses of stereoscopes, and in ornamenting glass. (*For windows.*)	2618	23rd Oct. 1863	Victor Julien Cassaignes
Improved means of attaching cords to window sashes.	2678	29th Oct. 1863	James Rawlings.
A new system of fastening for doors, windows, safes, chests and other similar purposes -	2742	5th Nov. 1863	Henry Hancock. William Henry Vickers, junior.
An improved apparatus for closing and fastening gates, doors and things of that description. (*Windows.*)	2934	21st Nov. 1863	Ludovic D'Estienne De Saint Jean.
Fitting moveable or travelling frames and surfaces - (*Sashes.*)	3025	2nd Dec. 1863	John Dales.
An improved sash or shutter fastener, also applicable to doors and casements.	3117	10th Dec. 1863	Richard William Pyne.
An improved shop or window shutter made of corrugated sheet iron.	3193	18th Dec. 1863	Thaddeus Hyatt.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WIRE-WORKING; WIRE-ROPES; TELEGRAPH CABLES.			
Manufacture of wire	22	2nd Jan. 1863	Alfred Solier Bolton.
Certain improvements in treating or covering strip steel or other suitable material for the making of crinoline skirts, and other similar purposes for which the same may be applicable, and which same treatment or covering may be used for trimming or strengthening certain parts of ladies' dresses	29	3rd Jan. 1863	William Tolson. Charles Brown.
Covering wire, crinoline steel, or hoops for skirts	54	7th Jan. 1863	Thomas Frederick Cashin.
Certain improvements in telegraphic cables	104	13th Jan. 1863	William Platts. John Bailey.
Improvements in machinery for plaiting cotton thread or other fibrous material over steels for crinolines, and in the mode of securing the plaiting to prevent it slipping thereon.	161	19th Jan. 1863	Henry Rushton.
Improvements in covering wire and other iron articles for the purpose of protecting them from oxidation, and in the mode or method employed therein.	163	19th Jan. 1863	William Henry Harrison.
Improvements in rotary screens and in the machinery or apparatus employed in the manufacture of such screens.	424	16th Feb. 1863	William Nalder.
Insulating and supporting telegraph line wires	464	20th Feb. 1863	Charles William Siemens.
Improvements in insulating and protecting telegraphic and other wires and rods, and in machinery connected therewith.	505	24th Feb. 1863	William Hooper.
Improvements in the manufacture of wire rope and cordage, and in the machinery employed therein.	575	28th Feb. 1863	Samuel Bateman.
Machinery or apparatus for the manufacture of carpets and other piled fabrics. (*Forming ends of pile wires.*)	593	3rd March 1863	John Henderson.
Improvements in the manufacture of iron or other metallic rod and wire, and in the machinery or apparatus employed in such manufacture.	777	25th March 1863	Michael Phillipps.
Improvements in treating and preparing iron, copper and other wires for telegraphic and other uses, for the purpose of preserving them from corrosion or decay.	963	17th April 1863	Richard Knight.
An improvement in waterproof compounds and in fabrics prepared therewith. (*For coating wire for crinoline.*)	988	21st April 1863	Edwin Lindsey Simpson.
An improved machine for unwinding crinoline steel	1045	27th April 1863	Samuel Osborne.
Improved apparatus for laying down, protecting and controlling submarine cables, for telegraphing from vessels moored off a coast to the shore.	1069	28th April 1863	Thomas Moore.
Laying submarine telegraph cables (*Communicated by Adolphe Pelegrin and Auguste Garbeiron.*)	1199	13th May 1863	Richard Archibald Brooman.
Improvements in nails or rivets for boots and shoes, applicable to other purposes	1211	14th May 1863	John Satchwell. William Henry Ashford. Cornelius Harrison.
Apparatus for insulating electric telegraph wires	1620	29th June 1863	William Andrews.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WIRE-WORKING, &c.—*continued.*			
An improved waterproof material - - - (*For telegraphic cables.*) (*Communicated by Jules Wiese.*)	1635	1st July 1863	William Snell.
Improvements in the manufacture of telegraphic wires and in the apparatus connected therewith. (*Communicated by Gustave Eugène Michel Gerard.*)	1668	4th July 1863	Henri Adrien Bonneville.
Certain improvements in coating or covering crinoline steel.	2046	18th Aug. 1863	John Briggs.
Improvements in pointing wire rods or wire in order to facilitate their introduction into drawplates - - - - - -	2109	26th Aug. 1863	Richard Johnson. George Bedson.
A new or improved method of adapting steel or other suitable metallic wire to be used instead of animal bristles or hair in sewing boots, shoes, saddlery, and leather works generally.	2183	4th Sept. 1863	Charles Thornhill.
Laying and supporting submarine telegraph cables	2190	5th Sept. 1863	William Norton.
Improvements in the manufacture and construction of fences, part of which are also applicable to the manufacture and construction of gate posts, and to poles and posts used for telegraph and signal purposes, and for stretching telegraph wires.	2192	5th Sept. 1863	Joseph Rowell.
Improvements in the manufacture of iron rods and in machinery to be employed in the said manufacture.	2237	11th Sept. 1863	William Taylor.
Improvements in shears for cutting metal threads, wires and rods, applicable also for gauging wires. (*Communicated by Leon Gauchez.*)	2323	21st Sept. 1863	Emile Alcan.
Metallic instruments to be used as substitutes for bristles in sewing, stitching, closing and otherwise joining boots and shoes and other leather work - - - - - - - (*Wire.*)	2352	24th Sept. 1863	Thomas Marshall. William Marshall.
Improvements in the mode of manufacturing submarine telegraph cables, in apparatus connected therewith, and in the method or principle of laying same, and in the preparation of the several compounds described for electric insulation and other purposes.	2386	29th Sept. 1863	Frederick George Mulholland.
Improvements in the manufacture of woven fabrics applicable to covering telegraph wires.	2387	29th Sept. 1863	Sam. Mendel.
An improved manufacture of bands or strips for crinolines.	2484	10th Oct. 1863	George Waide Reynolds.
Improvements in shears for cutting metals and other substances. (*Wire.*) (*Communicated by Hugues François Aubert.*)	2501	12th Oct. 1863	William Edward Gedge.
Testing the strength of wire for telegraphic and other purposes.	2763	6th Nov. 1863	Richard Johnson.
Apparatus for submerging submarine telegraph cables. (*Partly communicated by Werner Siemens.*)	2826	13th Nov. 1863	Charles William Siemens.
Improvements in the manufacture of tubes, rings and cords of india-rubber, and in covering telegraph wires - - - - - -	2893	18th Nov. 1863	Josiah George Jennings. Manuel Leopold Jonas Lavater.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WIRE-WORKING, &c.—*continued.*			
Improvements in the construction and working of electric telegraphs and in apparatus connected therewith, partly applicable to other purposes.	3006	1st Dec. 1863	Henry Wilde.
Compounds or compositions for coating or covering iron or wooden ships and vessels, metallic sheathing, telegraph cables and other objects, to preserve them from decay, fouling or other destructive action - - - - -	3012	1st Dec. 1863	Jesse Gustavus Redman. George Martin.
Pillars and apparatus for straining wire - -	3031	2nd Dec. 1863	John Harper.
A new and improved mode or process of covering or insulating wire for telegraphic and other uses or purposes, with twine, cordage and other covering of a like character - - -	3151	14th Dec. 1863	John Aylesworth Bailey. John James Speed.
Construction of machines for cutting and bending wire and similar substances for copper smiths, tin plate, iron and zinc sheet workers - -	3214	21st Dec. 1863	Isaac Coombs. John Tomlinson Pendlebury.
Telegraphic cables - - - - -	3252	23rd Dec. 1863	Frederick Walton.
WOOD AND VENEERS; ARTIFICIAL WOOD.			
Machinery and process for reducing wood to a fibrous condition, for the manufacture of paper stuff or pulp.	188	21st Jan. 1863	Carl Heinrich Roeckner.
Apparatus for drilling wood, stone, iron or other materials. (*Communicated by Joseph Julien Chenal.*)	370	11th Feb. 1863	Edward Thomas Hughes.
Improvements in veneering or overlaying woods according to two methods, 1st, by means of steam exhaustion or steam pressure or air exhaustion or air pressure, 2ndly, by the employment of electro-magnetism.	533	25th Feb. 1863	Alexander Macivor.
Apparatus for connecting and securing together planks of wood applicable to the building and caulking of ships and other vessels.	538	26th Feb. 1863	George Henry Lilley.
Construction or laying of wooden floors - - (*In patterns.*) (*Communicated by Edouard Hamelle.*)	657	9th March 1863	William Edward Newton.
Machinery for shaping wood - - -	666	11th March 1863	Henry Wilson.
Certain improvements in the method of producing surfaces in imitation of woods, and in printing therefrom.	779	25th March 1863	Joseph Hardman Worrall.
Portable apparatus for working drills and other instruments - - - - - - (*For carving.*)	794	26th March 1863	William Tod. Robert Paterson.
A process of manufacturing factitious blocks of wood of diversified shades and hues proper for veneering and other purposes.	905	10th April 1863	Gustave Colomb.
Ornamentation of papier mâché or other japanned wares, wood, ivory or other similar materials.	1145	7th May 1863	John Bettridge.
Improvements in laying veneers on to surfaces, in applying the glue for that purpose, and in the apparatus employed.	1161	9th May 1863	James Stickland.

Subject-matter of Patent.	Number of Patent.	Date.	Name of Patentee.
WOOD, &c.—*continued.*			
Machinery for working of wood - - -	1267	20th May 1863	John Thurgood Markall.
Improvements in boat building and in machinery for shaping wood therefor.	1791	16th July 1863	Nathan Thompson.
Machinery and process for reducing wood to a fibrous condition for the manufacture of paper stuff or pulp.	1821	21st July 1863	Carl Heinrich Roeckner.
Hydraulic apparatus - - - - (*Presses used in manufacture of hard woods.*) (*Communicated by Auguste Desgoffe and Achille Ollivier.*)	2159	1st Sept. 1863	William Clark.
Improvements in machinery for morticing, drilling, dovetailing and cutting wood, and in tools to be used for morticing - - - - -	2202	7th Sept. 1863	Samuel Gerish. John Weston.
Means or apparatus for coating wood and other surfaces.	2349	24th Sept. 1863	William White.
Improvements in treating ligneous substances, in separating and recovering the fibrous portions therefrom, in preparing, bleaching and sizing the same, and in machinery employed therein. (*See* "PAPER.") (*Communicated by Pierre Celestin Victor Baud and Theodore Casimir Delamarre.*)	2587	21st Oct. 1863	Richard Archibald Brooman.
Reducing and preparing wood for the manufacture of paper and pulp.	2606	22nd Oct. 1863	William Wharton Burdon.
A new method of bending the reverse ends of partridge canes and bending partridge canes without roots.	3022	2nd Dec. 1863	Robert Lublinski.
Fret saws - - - - - (*Communicated by Louis Pierre Nouvel the younger.*)	3059	5th Dec. 1863	Henri Adrien Bonneville.
For Sawing Wood, *see* "CUTTING." For Preserving Timber, *see* "PRESERVING WOOD."			

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